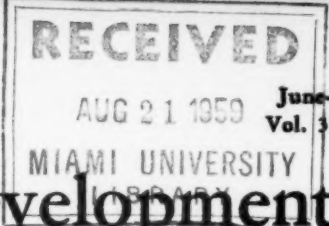


June-Aug.  
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# Child Development Abstracts & Bibliography

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## *Abstracts of Articles*

### **MORPHOLOGY**

**288. BROER, MARION R., & GALLES, NAOMI R. G. Importance of relationship between various body measurements in performance of toe-touch test.** *Res. Quart. Amer. Ass. hlth phys. Educ., Rec.*, 1958, 29, 253-263. From surveys of American and European children with the Kraus-Weber Test of Minimum Muscular Fitness, a high percentage of American boys and girls were found to be unable to touch their fingers to the floor with knees straight and hold this position for three seconds. With college women as subjects, these investigators found that the relationship of trunk-plus-arm length to leg length was not an important factor in the performance of the toe-touch test for those with average body builds; however, for those persons with extreme body types, a longer trunk-plus-arm measurement in relation to shorter legs gives an advantage in the performance of this test. —H. H. Clarke.

**289. CLARKE, H. HARRISON. Relation of physical structure to motor performance of males.** *Amer. Ass. hlth phys. Educ., Rec.*, 1958. (Contr. No. 6, *Amer. Acad. Phys. Educ.*) Materials from five studies conducted or directed by the author are reviewed in this report. The subjects included upper elementary, junior high and senior high school boys, and college men. The following four anthropometric measures were included in the different studies: flexed-tensed upper arm girth, body weight, chest girth, and lung capacity. A summary of some of the relationships found follows. (a) The intercorrelations of the anthropometric variables were much higher for junior high school boys than for upper elementary and senior high school boys. (b) Very high correlations were obtained between McCloy's pull-up and push-up scores and the body weight, chest girth, and arm girth tests. These high relationships were due to the heavy weighting given to body weight in the McCloy formula, combined with the fact that the three anthropometric variables have high intercorrelations with each other. (c) These anthropometric tests have fairly high correlations with various strength measures, but not high enough for predictive purposes. (d) The correlations obtained between structural and strength measures were higher for upper elementary, junior high, and senior high school boys than for college men. (e) For junior high school boys the correlations between lung capacity and strength tests were higher than between lung capacity and either arm girth, body weight, or chest girth. Lung capacity also had a fairly high relationship to physical maturity, as indicated by skeletal age. —Author's Abstract.

**290. CLARKE, H. HARRISON, & ESSLINGER, ARTHUR A. Medford boys' growth study.** *Northwest Med.*, 1958, 57, 1187-1188. This article briefly describes the origins and progress of a longitudinal growth study of boys in the Medford, Oregon, public schools. The project is sponsored by the Medford school system, Southern Oregon College, Oregon State Education Department, Athletic Institute (Chicago, Ill.), and the University of Oregon. The over-all and long-range purposes of the study are as follows: (a) to construct physical and motor growth curves for maturity indices, body structure measures, coordinated muscular strength elements and batteries, strength of individual muscle groups, agility and speed, explosive muscular power, and reaction time; (b) to relate the various physical and motor growth factors to skeletal age, adolescent development, somatotype, growth level, nutritional status, interests, sociopersonal adjustment, and scholastic aptitude and achievement; (c) to contrast all traits for boys at different levels of athletic ability, with special emphasis on those who make and who do not make athletic teams competing in inter-school competition. —Authors' Abstract.

291. DAHLBERG, A. A., & MENEGAZ-BOCK, R. M. **Emergence of the permanent teeth in Pima Indian children.** *J. dent. Res.*, 1958, **37**, 1123-1140. The paper is a critical analysis of method and an estimation of population parameters. Previous data on "racial" tooth eruption are very thoroughly summarized. The group studied was Pima children, 487 female, 470 male, aged 3.25 to 14.75 years. Permanent teeth up to and including M2 were studied, 28 in all. Tables give the median emergence age. Order is different in the maxilla, but same in the mandible for both sexes. Order is different in the upper and lower jaws. There is no difference, right and left sides. Compared to English children Pima anterior teeth erupt relatively late, while the reverse is true in the posterior teeth. Among Pima males lower M2 often precedes lower Pm2. The authors discuss heredity and environmental factors. —W. M. Kroghman.

292. FALKNER, FRANK. (Univer. of London, Child Study Centre) **Some physical measurements in the first three years of life.** *Arch. Dis. Childh.*, 1958, **33**, 1-9. Means and mean increments of recumbent-length, weight, crown-rump length and head circumference are given for children from a longitudinal developmental study in London. The children were born in 1952-1954. Standard deviations and percentiles are given. Comparative lengths and weights, and increments of both, are given for samples of children born from 1923 to 1954. The secular trend for children to become larger continues. The relationship between early, late, and adult life is discussed. There is very little relationship between size at 4 weeks and 1 year, but a good relationship between 1 year and 2 years. Size appears independent of rate of growth, which shows little relationship from any age to any age. Stem-stature indices are given and comparisons with other samples made. Their usefulness is discussed. —Author's Summary.

293. FEREMBACH, D. **Droites parallèles et morphologie crânienne chez les hommes modernes et chez les hommes de Néandertal.** (Parallel lines and cranial morphology in modern man and in Neanderthal man.) *Biotypologie*, 1958, **19**, 1-18. The author reports the results of a study of the lines connecting bregma and lambda, nasion and basion, glabella and bregma as well as lambda and basion in modern man and fossils and concludes that this technique is useful in classifying skulls. —S. G. Vandenberg.

294. FORD, E. H. R. (Univer. of Cambridge, England) **Growth in height of ten siblings.** *Hum. Biol.*, 1958, **30**, 107-119. The basic data consist of measurements of 5 brothers and 5 sisters, born between 1864 and 1884, to an upper middle class English family. Beginning at the first birthday and continuing through the 15th to 24th year, the father measured the height of each child. The child stood with back to a board, without shoes, and a ruler was placed on his head, parallel to the floor. The height was marked on the board, each child having a separate column. Measurements were also made of the son of the eldest brother from age 3 to 20 years. The author measured the heights recorded on the board with a steel rule to the nearest tenth of a centimeter. Rate of growth during adolescence was found to be very similar for both sexes. The spurt began slightly more slowly in the males and attained a greater maximum velocity than among the females. "Two-thirds of the greater size of the males was due to a longer period of growth. The remaining third was due partly to greater absolute size before adolescence and partly to greater size increase at adolescence. There was no straightforward relationship between height and time of onset of the adolescent spurt. . . . Since the rate of growth during and after adolescence was similar for all members of the family, adult size was closely related to size at the beginning and at the peak of the adolescent spurt of growth. A son of one of the brothers, born nearly 60 years after his father, grew 5% faster before adolescence and matured a year earlier than his father. His size and growth-rate during adolescence and his adult height did not differ significantly from those of the previous generation." The mean growth curves for the two sexes are inconclusive as regards a childhood growth spurt; the curves suggest a brief increase in rate at 7 to 8 years. —D. H. Eichorn.

**295. GARN, S. M., LEWIS, A. B., & POLACHEK, D. L. Variability of tooth formation.** *J. dent. Res.*, 1959, **38**, 135-148. Based on serial oblique jaw X-ray films, plus laterals, of 255 Ohio-born children of N.W. European ancestry, carefully selected for health, sociometric level, etc. Three stages were set up: (a) beginning calcification; (b) beginning root formation; (c) apical closure. 5th, 15th, 50th, 85th, and 95th percentiles were determined, plus quartiles ( $Q_1$  and  $Q_3$ ); also SD and CV. In the 255 children, with 30-190 examples of a given stage for a particular tooth, it is suggested that "the true variability of tooth formation is approximately 3 times as great as has been accepted so far" (i.e., in the Logan-Kronfeld and Schour-Massler data). When variability of tooth formation was compared with other developmental features, it was found that it compared favorably to tooth eruption, sexual maturation, etc., but was a bit less than that for osseous development. —W. M. Krogman.

**296. GARN, S. M. (Fels Res. Inst., Yellow Springs, Ohio), LEWIS, A. B., & POLACHEK, D. L. Variability of tooth formation in man.** *Science*, 1958, **128**, 1510. "Using serial oblique-jaw x-rays of a total of 255 white Ohio-born participants in the Fels Longitudinal Studies, we determined the time of occurrence of three stages of formation in five mandibular teeth on an individual basis, after reference to each succeeding and each previous x-ray in the series. . . ." The 5th and 95th percentiles for combined-sex distributions indicate that previous studies have greatly underestimated variability in tooth formation.

**297. HATTON, M. E., & GRAINGER, R. M. Reliability of measurements from cephalograms at the Burlington Orthodontic Research Centre.** *J. dent. Res.*, 1958, **37**, 853-859. The authors tested the reliability of certain measurements on tracings of lateral X-ray films of the head. They employed films of 15 3-year-old children, with duplicate sets of films taken on the same day. Specifically tested were the distance nasion - Bolton Point in the midsagittal plane, and the laterally placed mesio-distal mandibular measurement (C-M1) and molar height (crown M1 to lower border mandible). Tracing errors and radiographic errors from the measurements were 2.0%, 1.5%, and 14.6%, respectively, and 1.7%, 0.5%, 11.5% of the distribution variance, respectively. The authors conclude that roentgenographic cephalometric technique "is highly refined and that no practical improvement is needed." The basic factor in variability is due to real differences between children. —W. M. Krogman.

**298. HIXON, E. H., & OLDFATHER, R. E. Estimation of size of unerupted cuspid and bicuspid teeth.** *Angle Orthodont.*, 1958, **28**, 236-240. Measurements of 41 Iowa children (15 boys, 26 girls) of N.W. European origin were made on hydrocal casts and intra-oral X-ray films. Age range was 7-6 to 11-0 for deciduous teeth, 12-0 to 15-0 years for permanent. Maximum mesio-distal diameter of crowns at right angles to long axis of tooth was measured. Variability found between combined widths of deciduous molars and cuspids and their permanent successors ranged from 0.1 mm to 4.4 mm. SD of difference in size between 2 groups of teeth is greater than SE of estimate of technique proposed for estimating sizes of unerupted cuspid and bicuspid. —W. M. Krogman.

**299. HUNT, EDWARD E., Jr., COCKE, GRACE, & GALLAGHER, J. ROSWELL. (Harvard Medical School) Somatotype and sexual maturation in boys: a method of developmental analysis.** *Hum. Biol.*, 1958, **30**, 73-91. Where stages of maturation have been defined and applied to a sample of children, it is convenient to record the percentages of individuals who are at or beyond a stage as related to their ages. Such distributions may be transformed into a so-called "attainment curve." If grouped data are available, a convenient method is to plot the percentages on log probability paper. In this case, age is transformed into the logarithm of conceptional age, and the percentages of individuals into standard scores around a zero point at which 50% of the population are at or beyond the given age. In studies of both dental development and sexual maturation, attainment curves on log probability paper form straight parallel lines. . . . Tests of parallelism between different organs are valuable indications of their systematic or integrated relationships with one another.

... A crude method was devised of computing the equations of parallel attainment curves. This procedure was applied to the stages of sexual maturation which had been recorded in 226 boys at a New England board school. These students had also been somatyped. A study was therefore carried out which related body build and the trajectories of sexual maturation in these boys. For each of 5 somatotype subgroups, we calculated the variability of attaining the stages. Allometric equations relating most of the subgroups to the total series revealed the timing and velocity of maturation in boys of different physiques. Our data agreed with the findings of many previous authors that mesomorphy is associated with early maturation. In predominantly mesomorphic boys, the attainment of the stages is slightly more variable than (sic) the average, and the velocity of maturation is about average. In our group, ectomorphs show a small variability in the ages of attainment of the stages, but their velocity is 44% faster than the average. . . . Although the endomorphic sample is small, it shows high variability in the ages of attainment of the stages, an early onset and late ending of sexual maturation. The velocity is therefore low. Possible relationships between these findings and nutriture and body composition are discussed. —From Authors' Summary.

**300. JONES, PARRY A., & MURRAY, W.** (Medical Office of Health, Cheltenham) **The heights and weights of educationally subnormal children.** *Lancet*, 1958, 1, 905. Both in height and weight 126 children from 7 to 13 years of age in two institutions for the educationally subnormal were suggested strongly as having a much smaller physique than of average children. —F. Falkner.

**301. MEREDITH, H. V.** **Recent studies on growth of the body and face.** *Amer. J. Orthodont.*, 1959, 45, 110-124. This is a useful review article, based mainly on the author's own researches at Iowa. Variables relating to body size in childhood are discussed: sociometric status; racial background; secular period. Group and individual growth trends are given for the childhood years. Growth intercorrelations are presented: face and dental arch relations; dental arch intercorrelations; size and growth rate relations; growth rate interrelations. The foregoing are "packaged" into frames of reference for clinical use. —W. M. Krogman.

**302. MONOD, H., & PINEAU, H.** (C.N.R.S., Paris) **Nouvelles données anthropométriques concernant les jeunes adultes français.** (New anthropometric data on young French adults.) *Biotypologie*, 1958, 19, 24-31. Means and sigmas are reported for 32 anthropometric measures of 234 French males of average age 21 years and compared with results of previous studies. —S. G. Vandenberg.

**303. SMILLIE, DAVID.** (Merrill-Palmer School, Detroit, Mich.) **An evaluation of the channel system on the Baby Grid.** *Child Develpm.*, 1959, 30, 278-288. The paper describes and evaluates the Baby Grid (Wetzel) with reference to 230 infants seen at Merrill-Palmer. Findings were: (a) Some deviation from the standards described by Wetzel was found in 73% of the infants over the 2-year span. (b) Of these deviations, 83% were of a minor nature, while 16% were major. (c) The highest percentage of deviations were due to curvature (thinning out) earlier than expected. (d) A relatively large proportion of deviations occurred during the period from birth to 3 months. (e) Sex differences were not significant in either incidence or type of deviations. (f) Sex was found to be unrelated to the level of beginning curvature on the Baby Grid; physique to be related in the expected direction; while size-for-age was found to be directly related, with large infants curving at a later developmental level than small ones. (g) Size-for-age is the only characteristic of early and late curvers definitely related to the timing of curvature. —D. L. Tyler.

**304. WHITACRE, JESSIE, & GRIMES, ETHEL T.** (A & M Coll. of Texas, College Station) **Some body measurements of native-born white children of seven to fourteen years in different climatic regions of Texas.** *Child Develpm.*, 1959, 30, 177-209. The 3000 boys and 3535 girls measured were distributed among four places—San Antonio and Houston in the south, Lubbock and Denton 225 to 300 miles farther north. The south and north places differed in characteristic climatic

patterns during the 15 years which include all growth periods of these subjects. Means of each of the 11 measurements used in this study were larger for each year-of-age group for children in San Antonio and Houston than in Lubbock and Denton. Mean height and weight for year-of-age groups on Wetzel grids showed children in all places to be of medium build; but Lubbock and Denton groups were closest to "standard" development (67th percentile), Houston 7- to 12-year groups, nearer the 15th than the 67th percentile. With classification by parents' occupation, proportionately similar for places, means of each of five measurements were significantly larger for the three highest sociometric levels among the six occupational groups. With age disregarded, the children classified by hip-girth intervals within stature intervals, place differences completely disappeared for weight, bitrochanteric diameter, chest girth, calf girth, and waist height. Children's age, possible differences in food consumption, genetic background, and sociometric levels appeared not to explain place differences. Correspondence between characteristic climatic patterns and place difference in rate of growth may be coincidental. However, findings challenge further research to determine cause and effect in growth patterns and their relation to health, intellectual, social, and economic considerations. —Authors' Abstract.

**305. ZUK, G. H.** (St. Christopher's Hospital for Children, Philadelphia) **The plasticity of the physique from early adolescence through adulthood.** *J. genet. Psychol.*, 1958, **92**, 205-214. This study employed comparable sets of somatotype ratings on male and female subjects of the Adolescent Growth Study taken at ages 12, 17, and 33. The purpose of this procedure was to assess and evaluate such changes in the somatotype as occurred with maturation. Major growth in males with maturation occurred in the mesomorphic component; in females, in the endomorphic component. Growth in individual components appeared somewhat more stable in females than males. Significant differences in levels of endomorphy and ectomorphy (which were found to be highly intercorrelated as components) occurred between subgroups of early-, average-, and late-maturing females during adolescence; these differences did not persist into adulthood. With the exception of the endomorphic component, the somatotype tended to be fairly stable and consistent from early adolescence through adulthood. —Author's Summary.

#### PHYSIOLOGY AND BIOCHEMISTRY

**306. ACHESON, ROY M.** **Effects of starvation, septicaemia and chronic illness on the growth cartilage plate and metaphysis of the immature rat.** *J. Anat.*, 1959, **93**, 123-130. The histological appearance of the growth cartilage plates of a number of rats who died during the experiment on the effect of starvation and septicaemia on rat growth previously reported (Acheson and MacIntyre, 1958) have been studied. In these animals, in which growth stopped after exposure to these adverse circumstances, there was first a narrowing and increased calcification of the cartilage plate and later a decrease in the rate of osteogenesis in the metaphysis. The mechanism of formation of the lines of increased density in radiographs of children's bones is discussed in the light of these findings and the author concludes that the slowing of chondroplasia in the starved or septicaemic rat may be due to a decrease in the amount of pituitary growth hormone secreted. —J. M. Tanner.

**307. ACHESON, ROY M., & ARCHER, MAVIS.** **Radiological studies of the growth of the pituitary fossa in man.** *J. Anat.*, 1959, **93**, 52-67. The length and depth of the pituitary fossa has been measured in lateral skull X-rays of the Bolton collection at Western Reserve University. 22 boys and 18 girls were studied in a mixed longitudinal fashion from 3 months to 19 years of age. The mean length and depth and standard deviations of the sexes separately are given at 3-month intervals during the first year, at 6-month intervals to 5 years, and yearly thereafter. The means and standard deviations of the individual increments are also given yearly from 2 to 19. A study of the increment curves shows that there is an adolescent spurt for both sexes coincident with the spurt in stature. A spurt is greater for depth of pitui-



tary fossa than for its length. A number of drawings of individuals are given showing that some children cease all growth of the pituitary fossa by the age of 11 while some have a very pronounced adolescent spurt. The authors are of the opinion that growth of the pituitary fossa takes place by osteoclastic activity in its posterior part, the anterior wall probably remaining static throughout the growth period. —J. M. Tanner.

**308. APGAR, VIRGINIA** (Columbia Univer., Coll. Physicians & Surgeons, New York City), **HOLADAY, DUNCAN A., JAMES, L. STANLEY, WEISBROT, IRVIN M., & BERRIEN, CORNELIA.** *Evaluation of the newborn infant—second report.* J. Amer. med. Ass., 1958, **168**, 1985-1988. A scoring system to evaluate the condition of infants has been applied to 15,348 infants. The signs evaluated include color, respiration, muscular tone, irritability, and heart rate; the highest possible score is 10. Predictive value is demonstrated by the fact that the death rate among infants scoring 2, 1, or 0 was 15%, while that for infants scoring 10 was 0.13%. "The score was found to be a measure of the relative handicaps suffered by infants born prematurely, delivered spontaneously at term, delivered by cesarean section, or subjected to other obstetrical and anesthetic hazards. The lower scores were generally associated with chemical findings characteristic of asphyxia in the blood obtained by umbilical catheterization. The score was especially useful in judging the need for resuscitative measures, such as respiratory assistance." —I. Altman.

**309. BURES, J.** (Czechoslovak Academy of Sciences, Prague) *The ontogenetic development of steady potential differences in the cerebral cortex in animals.* EEG clin. Neurophysiol., 1957, **9**, 121-130. Steady potential differences of cerebral cortex in rats and guinea-pigs were measured during ontogenesis and the possibility of eliciting a spreading depression by topical application of KCl to the cortical surface in animals of various ages was studied. . . . The cortical surface of adult rats is 19-20 mV. positive against other electrically indifferent areas. This positive potential mainly develops during the first 20 days of life in rats, being 2.6 mV. in rats aged 5 and 14.0 mV. in rats aged 20 days. Only after the age of 15 days it is possible to elicit spreading depression by topical application of 1% KCl in rats. The slow potential change accompanying the wave of EEG depression is smaller in amplitude and more prolonged in duration in the 15 day old rats than in adult animals. Guinea-pigs on the contrary display definite cortical polarisation from just after birth. New-born guinea-pigs generally respond by a spreading depression to topical application of 1% KCl to the cortical surface. The values of cortical polarisation in different age groups are compared with other data concerning the morphogenetic and functional development of the brain in rats. —From Author's Summary.

**310. DRILLIEN, CECIL M.** (Univer. of Edinburgh) *Growth and development in a group of children of very low birth weight.* Arch. Dis. Childh., 1958, **33**, 10-18. A follow-up of 69 prematures who weighed less than 3 lbs. The ages of children seen for this purpose ranged from 6 months to 9 years, the majority between 2 and 5 years. The point is made that with detailed examinations the prognosis regarding average development for such children is considerably worse. This has been previously suggested. Data are presented as evidence of such children being retarded in physical and mental growth, of having a higher morbidity, and a higher incidence of physical handicaps and emotional disorders. "It appears likely that as the survival rate of this low birth weight group improves an increasing number of damaged children will survive." —F. Falkner.

**311. DRILLIEN, CECIL MARY.** (Univer. of Edinburgh) *A longitudinal study of the growth and development of prematurely and maturely born children. Part I. Introduction. Part II. Physical development.* Arch. Dis. Childh., 1958, **33**, 417-431. Part I. The introduction describes a most interesting longitudinal study of 600 premature and maturely born children born in 1953 and 1955. They were seen at 6, 12, 18, and 24 months. Subsequent papers will present the data collected under the headings: Physical Growth in Relation to Birth Weight, Height, of Parents, Nutrition, Early Illness, and Social Class; Mental Development in Relation to Birth Weight, Gestation Time, and Social Class; Morbidity in Relation to Nutrition, Maternal Efficiency, Place of Family, Housing and Social Class; Patterns of Maternal Care.

Part II. Mean weights, and mean increments for different birth weight groups with SDs at each age, and mean heights and mean increments at two years of age for these groups are given. Twins are included and subdivided. Correlation coefficients between weight and height increments and such factors as parents' height, illness, diet, maternal efficiency, social class, and birth weight are tabled (to 4 places of decimals). Among conclusions (some of which will be considered very controversial) reached are: (a) Mean weights up to 2 years are closely related to mean birth weight. (b) The largest babies at birth maintain their superiority at 2 years—but there is a "significant excess height increment in those smallest at birth." (c) "... boys show a greater weight increment at 2 years than girls. There is little difference between the sexes in height increment." (d) "... rate of growth whether measured by weight or height increment is affected by certain environmental factors." (e) Premature singletons and twins over 4½ lbs. at birth very nearly catch up with the mature babies by 2 years in height and weight. (f) Genetic factors have an influence on rate of growth, while "genetic and environmental factors are of approximately equal importance in their influence on growth whether measured by weight or height increments at 2 years." —F. Falkner.

312. ELLINGSON, ROBERT J. (Nebr. Psychiatric Inst., Omaha) **Electroencephalograms of normal, full-term newborns immediately after birth with observations on arousal and visual evoked responses.** EEG clin. Neurophysiol., 1958, 10, 31-50. EEGs of 227 normal, full-term infants aged 22 minutes to 125 hours were recorded during all stages of the sleep-waking cycle. Repeat recordings within the first 6 days of life were made on 26 subjects. Single and repetitive light flashes were presented to 65 cases; loud auditory stimuli, to 52 infants during sleep. Standard bipolar recording technique with 8 or 12 leads was used. No drugs were given. The sleep-waking pattern of the EEGs conformed in general to that described by other investigators. More low-voltage activity was observed during wakefulness than has been reported by some observers. EEG patterns were not related to maternal analgesia or anesthesia during labor or delivery or to the length of the second stage of labor. Evoked potentials were elicited in the occipital area in response to light flashes. These responses were more variable in wave-form and amplitude, showed greater "fatigability," and were of longer latency than those of adults. Repetitive flashes at 2/sec or faster tended to produce "on" and "off" responses, but driving was observed in only 2 cases (at 2.5 to 3.5 flashes/sec). "The evoked response data are interpreted as reflecting the physiological immaturity of the newborn's nervous system, associated with its anatomical immaturity. The major factor accounting for the long latencies of evoked responses is felt to be slow conduction in the afferent fiber tracts, but retinal and synaptic events may also be contributory. The peculiarities of wave-form and amplitude are felt to be functions of the immature visual cortex." —D. H. Eichorn.

313. FARQUHAR, JAMES W., & SKLAROFF, STANLEY A. (Univer. of Edinburgh) **The postnatal weight loss in babies born to diabetic and nondiabetic women.** Arch. Dis. Childh., 1958, 33, 323-329. The evidence in favor of claims that abnormal heaviness of infants born to diabetic mothers is largely due to edema, and that because of this such infants lose more weight than normal babies after birth, is discussed. It is found to be inconclusive and reasons are given. Infants of diabetic and nondiabetic mothers delivered by caesarean section lose similar amounts of weight when nursed under similar conditions. —F. Falkner.

314. FOLL, C. V. (Burma Oil Co., Rangoon) **Physical development of school girls in upper Burma.** Arch. Dis. Childh., 1958, 33, 452-454. This cross-sectional study on 702 children in an age range 10 to 14 years shows that the median age of menarche is 14.4 years confirming that tropical climates are associated with later menarche, that little growth in height occurs after 14 years—and growth starts earlier, the girls are lighter and shorter than Scottish and English contemporaries. —F. Falkner.

315. FUJIMORI, B., YOKOTA, T., ISHIBASHI, Y., & TAKEI, T. (Hokkaido Univer. Med. Sch., Sapporo, Japan) **Analysis of the electroencephalogram of children by histogram method.** EEG clin. Neurophysiol., 1958, 10, 241-252. Unipolar

recordings from bilateral parietal or occipital areas were used to compare the quantification of slow activity by the analyser, histogram, and mathematical methods. The subject were 43 normal children aged 3 months to 14 years and 44 neuropsychiatric patients age 7 months to 15 years. In addition EEGs of 83 mentally deficient (IQ below 80) children aged 13 to 17 years were analysed by the histogram method and compared with those of 30 normal boys aged 13 to 15 years. The analyser method proved most expeditious, but some theoretical and technical problems are yet to be solved. The mathematical method is the most rational, but too time-consuming to be practical. The histogram method is somewhat tedious, but provides the most readily understandable results. Histogram analysis showed the EEGs of mentally deficient children to contain a larger percentage of slow bands than those of normals. In 47% of these cases the percentage of slow activity in the parietal regions was abnormally large. The EEGs of 27 children suffering from encephalitis japonica were also analysed by the histogram method. A fairly good relationship between the percentage of the delta band and the severity of the illness was found. The authors conclude that "the histogram method is applicable in clinical practice, although it has no theoretical basis." —D. H. Eichorn.

**316. GASTAUT, HENRI, & GASTAUT, YVETTE.** (Marseille, France) **Electroencephalographic and clinical study of anoxic convulsions in children.** EEG clin. Neurophysiol., 1958, **10**, 607-620. 176 children with anoxic convulsions were studied. These children had electroencephalograms, electrocardiograms, and pneumograms taken simultaneously during wakefulness, natural sleep, and during activation procedures such as intermittent photic stimulation and hyperventilation, whenever the latter test could be carried out. In each case a strong compression of the ocular globes of a duration not exceeding 10 sec. was carried out and sometimes repeated 2 or 3 times. The latter manoeuvre (sic) allowed to provoke anoxic convulsions in 24 children with a mean age of 28 months, this number amounting to 13.5% of all the cases. In these 24 children the electroencephalograms, electrocardiograms and pneumograms were normal before the ocular compression. During this compression, however, marked changes in cardiac and/or respiratory rhythm were observed which explained the appearance of clinical and electroencephalographic convulsive signs. The modifications of the cardiac and respiratory rhythm as well as their consequences from an EEG and clinical point of view are described. The physiopathogenesis of anoxic convulsions is described. It is pointed out that neurologists and pediatricians are often unaware of the possible anoxic mechanism of childhood convulsions. —Authors' Summary.

**317. HEPNER, RAY.** (Univer. of Missouri Med. Center, Columbia) **Maternal nutrition and the fetus.** J. Amer. med. Ass., 1958, **168**, 1774-1777. A number of studies are reviewed which show the important part nutrition plays in reproductive problems. "Acute starvation with protein depletion over a short period has been proved to be associated with a decrease in the conception rate, and sterility with amenorrhea is produced over a longer starvation period. If acute depletion begins after conception the babies are small. . . . Some neurological defects in children, the convulsive, mentally deficient, and so-called cerebral palsied, may be related to nutritional factors, and human and animal studies suggest that all defects enumerated here can arise from nutritional deficiencies. . . . The same deficit of nutrition may produce many different effects on the reproductive gamut, depending on timing, severity, and duration of the deficit." —I. Altman.

**318. JOSEPH, R., JOB, J. C., & JOUAS, Mille.** (Inst. Natl. d'Hygiene, France) **Enquete sur les causes medico-sociales de l'hypotrophie du nourrisson.** (A study of medico-social cause of growth retardation in infancy.) Bull. Inst. natl Hyg., 1958, **13**, 357-371. 100 children from 1 to 23 months who were below 10% less than average weight, and 100 controls from identical conditions but of average weight, were studied. Many factors were suggested as being associated with such retardation, above all, the small height of both parents, and among others, prematurity, twin birth, severe acute infections, prolonged feeding difficulty, and congenital malformations. Other factors are suggested as probably being of influence. —F. Falkner.

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319. LIPPMAN, RICHARD W., PERRY, THOMAS L., & WRIGHT, STANLEY W. (Calif. Inst. of Technology) **The biochemical basis of mental dysfunction. II. Mental deficiency (amentia).** *Metabolism—Clin. Exp.*, 1958, 7, 274-330. The nature of the biochemical defect in phenylketonuria, galactosemia, cerebral lipidoses, and cretinism is reviewed. Diagnosis, treatment and prognosis are discussed. The importance of distinguishing between conditions resulting from hereditary biochemical defects and those resulting from biochemical or physical trauma to the fetus is stressed. It is argued that the behavioral similarities between amentia and dysmenia are often more striking than dissimilarities, so that differential diagnosis can be made only by biochemical study. —D. H. Eichorn.

320. MCGANITY, WILLIAM J. (Vanderbilt Univer. Sch. Med., Nashville, Tenn.), BRIDGFORTH, EDWIN B., & DARBY, WILLIAM J. **Vanderbilt cooperative study of maternal and infant nutrition. XII. Effect of reproductive cycle on nutritional status and requirements.** *J. Amer. med. Ass.*, 1958, 168, 2138-2145. Changes that occur in nutritional physiology during the reproductive interlude were observed in 2338 white women in the lower income brackets. Observations based on obstetric and pediatric performance and dietary, biochemical, and clinical assessment were made during each trimester and at the postpartum examination. Fundamental physiological changes were observed. There was a decrease of approximately 200 calories in the average intake between the second and third trimester which was associated with a decrease in the consumption of most of the individual nutrients. "The change in blood constituents fell into four patterns: (1) a decline during the first 32 to 34 weeks of gestation followed by a postpartum rise; this was present for the mean hematological values, total serum protein, and serum vitamin A, and the urinary excretion of thiamine and riboflavin; (2) a progressive increase during pregnancy followed by a postpartum decline; this pattern was exhibited by serum carotene, tocopherol, and the urinary excretion of N'-methylnicotinamide; (3) a slight decrease in the mean serum vitamin C levels during gestation followed by a further sharp decline postpartum among lactating mothers; and (4) a progressive increase in the absorption and utilization of iron as pregnancy advances. From the present study, it is clear that dietary intakes, greater than the Recommended Dietary Allowances of the Food and Nutrition Board, will not bestow protective benefits during pregnancy. It appears that the recommended standards for calories are too high for the expectant mother of today. A dietary that will provide the essential nutrients is readily attainable from food sources. The common obstetric routine of broad-spectrum nutritional supplementation is questioned, both as to need and as to dosage level." —I. Altman.

321. MACY, ICIE G. (Merrill-Palmer School, Detroit, Mich.) **Metabolic and biochemical changes in normal pregnancy.** *J. Amer. med. Ass.*, 1958, 168, 2265-2271. Pregnancy causes the regulatory and functional mechanisms of the body to be thrown out of balance. The effects of these imbalances are frequently seen as upsets in the gastrointestinal system. Results of the metabolic changes are observed in the composition of the blood cells and in the differing and distribution of the blood components. The levels of urinary components, the changes in hormonal secretions, the greater retention of nutrients, and the composition and function of the placenta are all indications of the metabolic changes that take place at the time of or after conception. —Author's Summary.

322. MEYER, HERMAN F. (Children's Memorial Hospital, Chicago) **Breast feeding in the United States: extent and possible trend. A survey of 1,904 hospitals with two and a quarter million births in 1956.** *Pediatrics*, 1958, 22, 116-121. A decrease from 38% in 1946 to 21% in 1956 in the per cent of infants leaving hospital maternity nurseries with breast feeding is reported. The decrease holds for the United States in general and for the several regions studied. —M. C. Templin.

323. MONOD, H., SAINT-SAENS, M., SCHERRER, J., & SOULA, C. **Contenu en oxygène du sang veineux chez l'homme au repos.** (Oxygen content of venous blood

in resting man.) *Biotypologie*, 1958, 19, 73-93. Results for 7 healthy males 20 to 22 years old of measurements of the oxygen content of venous blood taken around 10 a.m. are given as  $12.2 \pm 2.6$ . These results are compared with those obtained in 12 other studies by other investigators. Various factors producing variations are discussed such as variations from day to day, variations due to blood taking technique, the effect of pain, position and sex of subject. In spite of these factors the inter-individual differences exceed the intraindividual variations. —S. G. Vandenberg.

**324. MULLINS, A. G.** (St. James's Hospital, London) **The prognosis in juvenile obesity.** *Arch. Dis. Childh.*, 1958, 33, 307-314. Out of 373 patients seen consecutively in an out-patient department, 101 were selected as being more than 20% overweight. These were divided into "juvenile obese" (known to have been obese as a child and persistent into adulthood) and "adult obese" (to have developed obesity in adulthood). Their treatment, or lack of it, and histories lead to the conclusion that persistent juvenile obesity is an important cause of obesity in adult life (and thus a dangerous condition) and is a refractory type. While the importance of psychological factors and intelligence in the prognosis are stressed, the genetic aspect of this difficult problem is not stressed. —F. Falkner.

**325. ROYCE, JOSEPH.** **Use of body components as reference standards for basal metabolic rate.** *Res. Quart. Amer. Ass., hlth phys. Educ., Rec.*, 1958, 29, 60-73. In this study 100 male students, 18 to 20 years of age, were measured as to basal oxygen intake by closed-circuit procedure. 37 tests of the following types were also administered to these subjects: fat-fold measures; muscular strength; body widths, girths, and other dimensions; specific gravity; total bone, fat, water and water-free tissue components. The relationships of these measures to basal oxygen intake showed weight, water-free mass, and lean-body mass to be better reference standards than body surface area for the comparison of basal metabolic rates. —H. H. Clarke.

**326. RUBIN, ALAN, & MURPHY, DOUGLAS P.** **Studies in human reproduction: III. The frequency of congenital malformations in the offspring of nondiabetic and diabetic individuals.** *J. Pediat.*, 1958, 53, 579-585. The incidence of congenital malformations found in 463 offspring of 140 diabetic men is not significantly different from those found in 350 offspring of 154 nondiabetic men. —M. C. Templin.

**327. SCHREIDER, EUGENE.** **Variations de corrélations intraindividuelles de quelques caractères physiologiques et biochimiques chez l'homme.** (Intraindividual variance and correlations of some physiological and biochemical traits in man.) *Biotypologie*, 1958, 19, 99-107. The mean and standard deviation are reported for repeated determinations on one adult during an 18-month period on rectal and buccal temperature, pulse rate (resting, sitting, standing) maximum and minimum blood pressure, circulation time, hematocrit percentage, total cholesterol, neutral fats and phospholipids. These figures are compared with the means and standard deviations obtained from single determinations on a large number of adults. Intercorrelations of 28 determinations over 18 months on one subject are presented for the pulse, blood pressure, and temperature data. Intraindividual correlations for 2 adult males on 16 determinations of (a) cholesterol, (b) fat, and (c) phospholipids are a, b  $-.27$   $-.45$ ; a, c  $-.01$   $.74$ ; b, c  $.88$   $-.22$ . The results indicate considerable differences between individuals. —S. G. Vandenberg.

**328. SCHREIDER, E.** (École des Hautes Etudes, Paris) **Variabilité du pH et variabilité de (H+) du sang chez l'homme.** (Variability of the pH and (H+) of human blood.) *Bitopologie*, 1958, 19, 19-23. The author found that while the pH of venous and arterial blood for 50 males had a small variability only, the hydrogen ion concentration (H+) had a considerable variability comparable to anthropometric measures such as height. The correlation between arterial and venous blood (H+) for 49 men was  $.83$ , while the correlation between venous blood (H+) before and after prolonged exercise was  $-.34$  for 10 males. —S. G. Vandenberg.

**329. SILVERMAN, WILLIAM A., FERTIG, J. W., & BERGER, AGNES P.** **The influence of the thermal environment on the survival of newly born premature**

**infants.** Pediatrics, 1958, 22, 876-886. During the first five days of life, infants placed in incubators with an air temperature of 31.7° C (89° F) had a higher survival rate than controls placed in incubators maintained at 28.9° C (84° F). A sequential matched-pairs plan was used to evaluate survival differences under the two conditions. —M. C. Templin.

**330. SJOSTEDT, S., ENGLESON, G., & ROTH, G. (Univer. of Lund) Dysmaturity.** Arch. Dis. Childh., 1958, 33, 123-130. In order to prevent confusion between the terms "prolonged pregnancy" and "postmaturity" the term "dysmaturity" is introduced to denote the placental insufficiency syndrome. 1171 newborn infants have been classified according to dysmaturity and studied from various aspects. The frequency of dysmaturity in our series is 16.7% and increases with advancing gestation time; it is also higher for primiparae and male infants. Both normal and dysmature infants increase in weight during gestation, but from the 39th week onwards until delivery the dysmature infants have a mean birth weight 200 g. below that of normal infants. As dysmaturity becomes increasingly severe the oxygen saturation in the cord blood decreases, whereas there is an increase in the haemoglobin in the plasma pentoses, in the proteinbound hexoses, in the bilirubin and in the non-protein nitrogen. The more pronounced signs of dysmaturity are also allied to an increased frequency of albumin and glucose in the urine of the newborn infants. —Authors' Summary.

**331. STEARNS, GENEVIEVE. (Coll. Med., State Univer. of Iowa, Iowa City) Nutritional state of the mother prior to conception.** J. Amer. med. Ass., 1958, 168, 1655-1659. A number of studies are reviewed to show that pregnancy wastage and neonatal mortality are greater when the nutrition of the mother is habitually poor. In the American family, the nutrition of adolescent girls is usually poorer than that of younger children; moreover, this is the group least amenable to nutrition education. "The ideal situation is the maintenance of excellent nutrition from conception throughout life. . . . Serious effort should be made to provide nutritional education to all ages, wherever and whenever possible." —I. Altman.

**332. STEFANIK, PATRICIA A., HEALD, FELIX P., Jr., & MAYER, JEAN. Caloric intake in relation to energy output of obese and nonobese adolescent boys.** Amer. J. clin. Nutrition, 1959, 7, 55-62. Comparison was made of the food eaten and the amount and degree of participation in physical activity of 14 obese adolescent boys in relation to that of paired control nonobese boys during a summer camp season and for the previous school year. The energy intake of the obese boys was significantly less than that of the nonobese controls. Little difference was noted in the amount of time scheduled for light, moderate, and very active exercise but the degree of participation in the active exercises was observed to be generally less for the obese than for the nonobese. —Authors' Summary.

**333. STICKLER, G. B., & PINKEL, D. Calculations of nutritional allowances for infants and children on the basis of body surface.** J. Pediat., 1958, 53, 464-466. Using data from the Studies of Child Health and Development of the Harvard School of Public Health and from the Iowa Welfare Research on children 5 to 15 years, a linear relationship was found for the pediatric age group between caloric allowances and body surface. The caloric need of a normally growing active child approximates 2200 calories per square meter. His need would be met by 80 gm. of protein, 265 gm. of carbohydrates, and 85 gm. of fat per square meter of body surface. —M. C. Templin.

**334. WEINER, W. (Birmingham and Manor Hospital, Walsall), CHILD, R. M., GARVIE, J. M., & PEEK, W. H. Foetal cells in the maternal circulation during pregnancy.** Brit. med. J., 1958, 2, 770-771. A case of foetal blood loss into the maternal circulation is described. The foetal cells were recognized during the pregnancy in the blood stream of an immunized mother. The maternal serum contained an anti-rhesus antibody which coated the foetal cells in the maternal circulation and gave rise to a positive direct Coombs test. It was successfully eluted from the coated cells. —Authors' Summary.

335. **Prognosis for children of low birth weight.** Brit. med. J., 1958, 2, 1397-1398. The reported findings of the Joint Committee of the Institute of Child Health (University of London), the Society of Medical Officers of Health and the Population Investigation Committee are editorially discussed. The study included all premature babies born during a single week in 1946 in England, Wales, and Scotland and matched full-term control babies. —W. W. Sutow.

### CLINICAL MEDICINE AND PATHOLOGY

336. **ADELMAN, MAURICE** (Providence Lying-In Hospital, R. I.), **BELL, WILLIAM J.**, **GIUNTA, FRANK**, **BARRETT, JOHN T.**, **BELLIN, LEONARD B.**, & **APPLETON, RUTH.** **Practical management of erythroblastosis fetalis in a community hospital.** J. Amer. med. Ass., 1959, 169, 825-833. In 14,908 live births occurring at the Providence Lying-In Hospital in a 2-year period, 111 babies were born with erythroblastosis, with 7 being stillborn. Of the 104 living, 58 were due to Rh incompatibility and 46 to ABO incompatibility. Methods of treatment are described. The goal was to avoid kernicterus by keeping the serum indirect bilirubin level from rising above 20 mg. per 100 cc. The bilirubin value was found to be more reliable than the hemoglobin value as an indicator of the severity of the hemolytic process. The most important part of treatment is the exchange transfusion, and treatment must be prompt. In the most severe cases, with hydrops fetalis, profound anemia, and cardiac failure, the only hope lies in immediate exchange transfusion followed by a second transfusion within three or four hours. There were 6 deaths among the 104 liveborn babies, 5 with Rh and 1 with ABO incompatibility. —I. Altman.

337. **ARCHIBALD, H. M.** (Northern Region, Nigeria) **Influence of maternal malaria on newborn infants.** Brit. med. J., 1958, 2, 1512-1514. Of 484 women, 440 gave birth to full term single infants. Blood smears collected from the maternal surface of the placenta and from the mother's finger at delivery showed that 62 of 440 placentae were infected with *P. falciparum*. Infants born from infected placentae had a mean birth weight consistently below that of those born from uninfected placentae. —W. W. Sutow.

338. **BAKER, LENOX D.** (N. C. Cerebral Palsy Hospital, Durham), & **DODELIN, RICHARD A.** **Extra-articular arthrodesis of the subtalar joint (Grice procedure): Results in seventeen patients with cerebral palsy.** J. Amer. med. Ass., 1958, 168, 1005-1008. This operation was performed on 29 feet on 17 patients, of whom 11 had been nonambulatory. Only one is now considered nonambulatory. Ten are free of both crutch and brace. Indications for the operation are described. —I. Altman.

339. **CANN, HOWARD M.** (U. S. Public Hlth Serv., Washington, D.C.), **NEYMAN, DOROTHY S.**, & **VERHULST, HENRY L.** **Control of accidental poisoning—a progress report.** J. Amer. med. Ass., 1958, 168, 717-724. There are now about 200 local poison control centers in the United States. Preschool children were involved in 86% of cases reported from such centers. Drugs, which accounted for about 50% of all ingestions, household preparations, pesticides, and petroleum distillates were the most commonly ingested products. The local centers aid physicians in the treatment of accidental poisoning by providing information about the nature and toxicity of ingested substances and the treatment of poisoning from these substances. Treatment facilities are available at most centers. "Follow-up data indicate that proper storage of potentially toxic substances must be emphasized in educational campaigns directed toward parents of preschool-aged children. Such education must be directed from physicians to parents. Community educational campaigns by local medical societies, health departments, poison control centers, and civic groups should reinforce this important physician activity." —I. Altman.

340. CANNON, D. S. H. (Wesley Guild Hospital, Ilesha, W. Nigeria) **Malaria and prematurity in the western region of Nigeria.** Brit. med. J., 1958, 2, 877-878. Out of 362 newborn African babies, 30% had a placenta infected with malarial parasites. The mean birth weight in the 130 newborn that had an infected placenta was 11 oz. (312 g.) less than the birth weight of 262 whose placenta was not infected. There were 33% of premature babies in deliveries where the placenta was found infected with malaria parasites; in deliveries with noninfected placenta, the respective figure was 12%. There was no case of congenital malaria among 117 newborn, 25.6% of whom had an infected placenta. There appears to be a negative correlation between frequency of infection of the placenta and the parity of the African mother. —Author's Summary.

341. CHANOCK, ROBERT M., et al. (Nat'l Inst. of Allergy and Infectious Diseases) **Association of hemadsorption viruses with respiratory illness in childhood.** J. Amer. med. Ass., 1959, 169, 548-553. Observations were made on 1738 children hospitalized in the District of Columbia, 879 with respiratory disease and 859 without at the time specimens for virus isolation were obtained. Types 1 and 2 hemadsorption viruses were recovered from 6.2% of the group with respiratory disease, while only two isolations were made from the other group. These are myxoviruses which demonstrate absorption when guinea pig erythrocytes are added to infected tissue cultures. The highest rate of virus recovery, 16.7%, or complement-fixing antibody rise, 30.2%, occurred for type 2 virus in patients with the croup syndrome. —I. Altman.

342. CHENEY, E. A. **Factors in the early treatment and interception of malocclusion.** Amer. J. Orthodont., 1958, 44, 807-826. Cheney has devised what he calls a "facial form analysis," judging the face in 3 planes, horizontal, vertical, transverse, and in 2 views, lateral and facial. For each view he establishes planes and reference points typical of good "balance." In "balanced" faces early treatment prognosis is best; "here the control of local factors permits the development of nearly ideal dentitions." In "unbalanced" faces prognosis is not so good; "it is usually impossible to direct the growing dentition into satisfactory occlusions." In "borderline" cases early treatment is in "the form of growth guidance." A number of case histories illustrate Cheney's concepts and procedures. —W. M. Krogman.

343. CLAYTON, MACK L. (899 Detroit St., Denver, Colo.), & TURNER, DONALD A. **Upper arm block anesthesia in children with fractures.** J. Amer. med. Ass., 1959, 169, 327-329. Brachial block anesthesia by the axillary route, as described by Accardo and Adriani, is an excellent, safe method of regional anesthesia. The nerve supply of the arm is blocked without the possibility of thoracic complications. Thoracic complications from supraclavicular blocks are quite frequent and at times serious. This block has been especially useful in the treatment of recent fractures in children, as one may assume there is food in the child's stomach and therefore a risk of aspiration if general anesthesia is used. The resulting sympathetic block is also of value in certain cases, e.g., supracondylar fractures of the humerus. The technique is simple. Children have not objected to the technical use of the needle and have cooperated well. In 80 consecutive cases there has been only one failure. It is interesting to note that, of these cases, 27 occurred during the months of April and May, 1958. This indicates the growing interest in this type of block anesthesia in our locality, although we have been using the method since 1954. —Authors' Summary.

344. CLYMAN, MARTIN (New York City Dept. of Health), PAKTER, JEAN, JACOBZINER, HAROLD, & GREENSTEIN, FREIDA. **Intravenous use of oxytocin (Pitocin) for induction of labor.** J. Amer. med. Ass., 1959, 169, 1173-1181. Analysis was based on birth and fetal death certificates in New York City for 1955-1956; these certificates contain information on whether induction was attempted and the method used. Additional information was obtained from the directors of obstetric services in 79 hospitals in 1955 and 83 hospitals in 1956. In 1955, 4.7% of the live

births were induced with intravenously given oxytocin; in 1956, the percentage was 5.0. Analysis by type of accommodation showed that oxytocin was used five times as frequently among private patients as among ward patients. Marked seasonal variation was noted on the private services with peaks in July, August, and December; elective induction was chiefly responsible. "The infant mortality rate was almost twice as high for infants delivered by cesarean section where oxytocin had been previously used as compared with those delivered by caesarean section where previous induction had not been attempted. In several cases of puerperal mortality oxytocin appeared to have initiated an unfortunate sequence leading to rupture of the uterus, hypofibrinogenemia, and uterine hemorrhage." —I. Altman.

345. HOLOWACH, JEAN, THURSTON, DON L., & O'LEARY, JAMES. **Jacksonian seizures in infancy and childhood.** *J. Pediat.*, 1958, **52**, 670-686. 114 cases of jacksonian epilepsy received in the St. Louis Children's Hospital over a five year period are reviewed under the following headings: incidence, sex, race, age at onset, heredity, etiology, clinical analysis of seizures, hemiplegia, mental retardation, the electroencephalogram and air encephalograms. —M. C. Templin.

346. JOHNSON, ERNEST W. (Dept. Med., Ohio State Univer., Columbus) **Examination for muscle weakness in infants and small children.** *J. Amer. med. Ass.*, 1958, **168**, 1306-1313. A systematic approach to diagnosis of suspected muscle weakness is described, involving three steps: palpation of the muscles, examination for muscle tightness, and demonstration of muscle function. "When the clinical examination suggests weakness or the physician suspects a disease or injury of the motor unit in the absence of physical findings, the most sensitive method of detecting and localizing such pathology used to date is the electromyographic examination." —I. Altman.

347. JOHNSTON, M. C. **Orthodontic treatment for the cleft palate patient.** *Amer. J. Orthodont.*, 1958, **44**, 750-763. Four cleft palate types are recognized: (a) cleft lip (and alveolus); (b) cleft palate; (c) unilateral cleft lip (and alveolus) with associated cleft palate; (d) bilateral cleft lip (and alveolus) with associated cleft palate. For each type the author discusses problems and research in dento-facial growth and development, orthodontic treatment, and prosthetic retention. —W. M. Krogman.

348. KENT, HERBERT. (Univer. Oklahoma School of Med., Oklahoma City) **Potential for rehabilitation in quadriplegic teen-agers.** *J. Amer. med. Ass.*, 1959, **169**, 817-824. In a 2½-year period, 12 patients, 6 teen-agers and 6 adults, with cervical cord transections were followed up in physical medicine. All the disabilities were sustained in accidents. Impressions gained from the comparison of adolescents with adults are that the former possess greater potential for rehabilitation. Adolescents are more cooperative than young children and less hampered by ingrained traits than the adult. He must cooperate in giving attention to his skin and urinary and neuromuscular systems; and he must be taught to rely as much as possible on his own capabilities. The level at which the spinal cord was injured is important in deciding the therapy. Early expeditious comprehensive therapy is also very essential. —I. Altman.

349. KOVE, SIMON (New York Univer. Coll. Med., New York City), GOLDSTEIN, STANLEY, & WRÓBLEWSKI, FELIX. **Serum transaminase activity in neonatal period: valuable aid in differential diagnosis of jaundice in the newborn infant.** *J. Amer. med. Ass.*, 1958, **168**, 860-867. Clinical and laboratory data have been obtained showing that the differential diagnosis of neonatal icterus is facilitated by serial measurements of transaminase activity of the serum. In 63 normal newborn infants the glutamic oxalacetic transaminase (GO-T) activity levels ranged from 13 to 120 units; for glutamic pyruvic transaminase (GP-T) the range was 12 to 90 units. In infants with neonatal icterus classified as physiological, transaminase activity remained within the normal range, and no correlation was found between the intensity of the icterus and the transaminase activity. Data from 15 infants (including previ-



ously published data on nine), with jaundice due to pathological conditions, indicate that characteristic patterns of enzyme activity appear for each of the varied causes of neonatal icterus. In infants with extrahepatic infection and usually in those with hemolytic conditions the enzyme activity remains within the normal range. However, in an infant with a fulminant form of hemolytic disease of the newborn, GO-T activity alone was transiently elevated to about 300 units. In all cases of biliary obstruction the GO-T and GP-T values rose gradually to levels below 800 units. In an infant with very mild acute hepatitis (homologous serum) the enzyme activity rose sharply during the stage of increasing hyperbilirubinemia to well about 800 units (to 1140 units) and fell sharply thereafter. Serial determinations of serum transaminase activity in cases of neonatal icterus, therefore, aid in recognition of patients requiring surgery. —Journal Summary.

**350. LANGE, KURT** (New York Med. Coll., New York City), **WASSERMAN, EDWARD, & SLOBODY, LAWRENCE B.** **Prolonged intermittent steroid therapy for nephrosis in children and adults.** J. Amer. med. Ass., 1958, **168**, 377-381. A specific regimen of intermittent steroid therapy was established for 35 children and 11 adults with nephrosis. After one year, therapy was gradually terminated by prolonging the intervals between maintenance courses. The patients have been observed from 21 to 84 months, with an average of 40.8 months. Mortality in this period has been reduced to 1 from an expected 12.8; and the treated group have been able to carry on normal daily activities. Growth and development were not impaired. —I. Altman.

**351. LUNDY, JOHN S.** (Mayo Clinic, Rochester, Minn.) **Amnesia-analgesia for the management of children too young to cooperate.** J. Amer. med. Ass., 1959, **169**, 1184-1187. Cardiac catheterization, like many other diagnostic and therapeutic procedures, poses especially difficult problems for the anesthesiologist when the patient is too young to cooperate. The procedure here outlined consists of a sequence of steps whereby the requisite degree of tranquility, analgesia, and amnesia can be obtained without interfering with the tests or examinations being carried out. Upon this background it is possible to superimpose anesthesia with nitrous oxide, cyclopropane, or ether for short periods when necessary. Exact calculation of dosages is essential. Applied in 133 cases of cardiac catheterization and 100 comparable operations of other kinds, this plan has reduced to a minimum the respiratory and other reflex disturbances which otherwise make it difficult to interpret results. —Journal Summary.

**352. MCGOVERN, JOHN P.** (Baylor Univer. College of Med., Houston, Texas) **Therapy of acute attacks of asthma in infants and children.** J. Amer. med. Ass., 1959, **169**, 20-23. Salient features in the therapy of acute attacks of asthma in infants and children include early bronchodilation, sedation, and hydration, and elimination of allergens. The physician must select a few drugs and learn their action well, both physiologically and from experience with their use. When it is necessary to utilize inhalent therapy, it must be used on sound physiological principles. In all, the physician must be cognizant of the emotional factors at play—both in the little patient and in the parents—and of their interaction. —Author's Summary.

**353. MACKENZIE, ELLEN P.** **The treatment of anorexia.** J. Pediat., 1958, **53**, 187-197. After consideration of the social and cultural implications of anorexia the paper discusses "the handling of the otherwise healthy child whose appetite does not satisfy his parents, and presents the method, partly empirical and partly based on scientific theories, which has been used successfully by the author for five years on over one thousand patients." —M. C. Templin.

**354. MALKASIAN, GEORGE D., JR.** (Mayo Clinic, Rochester, Minn.), **HUNTER, JAMES S., JR., & REMINE, WILLIAM H.** **Ectopic pregnancy—analysis of three hundred twenty-two consecutive cases, 1935-1954.** J. Amer. med. Ass., 1958, **168**, 985-990. In a recent study in Minnesota, ectopic pregnancy was found to be the cause in 2.2% of obstetrically caused maternal deaths. Hence, records at Mayo

Clinic for a 20-year period were reviewed. The cases were divided into two 10-year periods, each containing 161 cases. Only one death occurred in the early group and none in the recent group. The two groups were alike in age, parity, initial complaints, incidence of abortion, and correctness of diagnosis. Negative results from pregnancy tests were of no value in eliminating the possibility of ectopic pregnancy, and positive results did little to confirm it. "A tendency toward increasingly conservative surgery and more liberal use of blood transfusion was noted in the later group. . . . If dilation and curettage had been performed on all patients suspected of having ectopic pregnancy in our series, 18 intrauterine pregnancies that later reached term would have been interrupted." —I. Altman.

**355. MARSHALL, MATTHEW, JR.** (Children's Hospital, Pittsburgh, Pa.), & **JOHNSON, S. HARRIS, III.** *Use of nitrofurantoin in chronic and recurrent urinary tract infection in children.* J. Amer. med. Ass., 1959, 169, 919-922. Nitrofurantoin was administered to 100 children with chronic or recurrent urinary tract infection for periods up to 27 months. Follow-studies lasting 6 to 48 months included clinical observation, urinalysis, urine culture, and further urologic study when indicated. The therapeutic dosage was 6 to 10 mg. and the prophylactic dosage 1 to 5 mg. of nitrofurantoin per kilogram of body weight per day. The drug was successful in controlling the ailment in 82 of the children. Recurrences were either eliminated or reduced in incidence, duration, and severity. By readministering or increasing the dosage of nitrofurantoin the infection was controlled again in all but 6 patients. Nitrofurantoin therapy should not replace surgical treatment when such is indicated. —I. Altman.

**356. POLANI, P. E.** (Guy's Hospital, London) *Prematurity and "cerebral palsy."* Brit. med. J., 1958, 2, 1497-1499. The incidence of prematurity in various clinical types of cerebral palsy is reviewed. A particularly strong association is found with two neurological syndromes: dystonic/choreoathetoid cerebral palsy following severe neonatal jaundice not due to blood-group incompatibility, and cerebral spastic paraplegia/diplegia. The possible mechanism of this latter relationship are considered and a selective developmental origin for the neurological troubles is favoured tentatively. Because of the association between retrolental fibroplasia and cerebral spastic paraplegia/diplegia, and because of the clinical features of the cerebral spastic paraplegia syndrome without history of perinatal or postnatal troubles, a postnatal interference with development is the mechanism postulated for this clinical type of cerebral palsy. —Author's Summary.

**357. RATHBONE, J. S., & SNIDECOR, J. C.** *Appraisal of speech defects in dental anomalies with reference to speech improvement.* Angle Orthodont., 1959, 29, 54-59. Discussion of speech sounds associated with dental anomalies: (a) spaces, all dental sounds save n and y, especially s, sh, z, zh are friction sounds; (b) high palate, dental sounds s, z, th, r, t; (c) width of arch; dental sound s, z, th; open bite, dental sounds s, sh, z, zh, th, and occasionally t and d; (d) degree of protrusion, dental sounds s, sh, z, zh, plus other friction sounds; (e) thickness of alveolar ridge in upper anterior region, dental sounds s, sh, z, and friction sounds; (f) severity of rotated teeth, same as space. It is recommended that speech therapy should follow orthodontic correction, and that the orthodontist should learn to recognize defective speech sounds. —W. M. Krogman.

**358. ROONEY, DONALD R.** (Emory Univer. School of Med., Atlanta, Ga.), & **POWELL, R. WALDO.** *Carcinoma of the thyroid in children after x-ray therapy in early childhood.* J. Amer. med. Ass., 1959, 169, 1-4. Of 10 cases of carcinoma of the thyroid in children under 17 years, 7 had received x-ray therapy for benign conditions in infancy or in early childhood. Review of reported cases now shows a total of 357, with a third having received previous radiation therapy. Although this suggests that radiation therapy may be a causative factor in thyroid cancer, further studies are needed before definite conclusions are reached. "Until that time, young children should be protected from all ionizing radiation with few or no exceptions in the treatment of nonmalignant conditions. —I. Altman.



359. SCHERR, MERLE S. (Charleston Memorial Hospital, Charleston, W. Va.), & FRANKEL, LAWRENCE. **Physical conditioning program for asthmatic children.** J. Amer. med. Ass., 1958, **168**, 1996-2000. A program of respiratory and physical exercises for children with bronchial asthma was started at the Charleston YMCA in 1956. To date 28 children have been enrolled. The program has four broad phases: basic breathing techniques, postural exercises, gymnastics, and confidence building activities. Parent, physician, and physical instructor act as a team, although parents are excluded from the first few sessions with each child. —I. Altman.
360. SHERIDAN, M. D. (Ministry of Health) **Simple clinical hearing tests for very young or mentally retarded children.** Brit. med. J., 1958, **2**, 999-1004. A series of simple clinical auditory screening tests which have been found useful in the preliminary assessment of the everyday hearing of very young or mentally handicapped children is described. The material required (common household objects—toys and pictures) is listed. A brief summary of normal speech development during the preschool years is given. —Author's Summary.
361. SMITH, E. W. (Johns Hopkins Hospital, Baltimore, Md.), & KREVANS, J. R. **Clinical manifestations of hemoglobin C disorders.** Bull. Johns Hopkins Hosp., 1959, **104**, 17-43. The clinical manifestations of hemoglobin trait, sickle hemoglobin C disease, hemoglobin C-thalassemia and hemoglobin C disease are discussed. Nine cases of hemoglobin C disease are presented and the data concerning a total of 30 cases are collated. Two cases of sickle cell-hemoglobin C disease are reported in which fat and bone marrow emboli were the cause of death. —Authors' Summary.
362. STAPLES, O. SHERWIN. (Hitchcock Hospital, Hanover, N.H.) **Supracondylar fractures of the humerus in children: Complications and problems associated with traction treatment.** J. Amer. med. Ass., 1958, **168**, 730-734. In a period of 11 years, 86 children, 1 to 14 years old, with supracondylar fractures of the humerus have been seen at the Hitchcock Hospital. Of these, 31 were treated by traction. For 7, traction alone was ineffective or complications developed. The problems connected with these cases are described. All but one case treated by traction recovered normal or almost normal function without significant deformity. It is concluded that while traction treatment has an important place in management, there is no single method which can be universally applied as treatment for the badly displaced supracondylar fracture of childhood. In these severe injuries, there must be careful selection of treatment and constant vigilance, no matter what type of treatment is used. —I. Altman.
363. VAN GELDER, DAVID W. (Tulane Univer. School of Med., New Orleans, La.), CAREY, DON, COLVIN, S. HARVEY, Jr., & RANDALL, W. SPEARS. **Neonatal infections in a community hospital: Report of two outbreaks.** J. Amer. med. Ass., 1959, **169**, 559-566. Outbreaks of neonatal infections occurred in both 1956 and 1957 in a community general hospital of 300 beds. In 1956, when a temporary nursery was being used, there were 4 cases and 3 deaths. In 1957, another outbreak occurred in which there were 26 cases and 9 deaths. While no one organism could conclusively be held responsible, *Listeria monocytogenes* predominated in the first outbreak and group A streptococci in the second. "The striking common factor in both nursery outbreaks was overcrowding. . . . In both instances the umbilicus appeared to be a likely portal of entry for infection. The most consistent observation at autopsy in the 1957 outbreak was myocardial involvement. These epidemics again reveal the danger of nursery overcrowding with possible subsequent breakdown in rigid aseptic technique." —I. Altman.
364. WHEATLEY, GEORGE M. (Metropolitan Life Ins. Co., New York City) **Pediatrics in transition.** J. Amer. med. Ass., 1958, **168**, 856-859. The practice of the pediatrician has been changing under the impact of many socioeconomic factors. Foremost among these is the continued improvement in the general physical, educational, and social well-being of children in the United States. As a result, the pedia-

trician is confronted less frequently with severely sick children and is called upon more and more for the guidance of the healthy child, the prevention of disease and trauma, and the care of the handicapped and emotionally disturbed child. The teaching of pediatrics in medical schools needs to be modified in view of this change, and research programs should recognize the new challenges and opportunities that have resulted from it. —Journal Summary.

**365. WIENER, ALEXANDER S.** (Office of Chief Medical Examiner, New York City), & **UNGER, LESTER J.** **Rh factors related to the Rh<sub>0</sub> factor as a source of clinical problems.** *J. Amer. med. Ass.*, 1959, **169**, 696-699. In the theory of hemolytic transfusion reactions and of hemolytic disease in the fetus and the newborn, the Rh<sub>0</sub> factor holds a special position. It is the most antigenic of the Rh-Hr blood factors and the usual source of clinical complications. Because of the recent discovery of new antibodies within this system it has become necessary to assume that standard Rh-positive blood contains factors Rh<sup>A</sup>, Rh<sup>B</sup>, Rh<sup>C</sup>, and others, as well as Rh<sub>0</sub>. The theory and nomenclature here developed makes it easier to understand the interrelations of these factors and should aid the physician in solving certain puzzling clinical problems. Its predictive value makes it helpful in planning further investigations. —Journal Summary.

**366. WILSON, G. M.** (Univer. of Sheffield), **KILPATRICK, R.**, **ECKERT, H.**, **CURRAN, R. C.**, **JEPSON, R. P.**, **BLOMFIELD, G. W.**, & **MILLER, H.** **Thyroid neoplasms following irradiation.** *Brit. med. J.*, 1958, **2**, 929-934. Clinical information on 9 patients in whom thyroid neoplasms developed in glands that had been exposed previously to ionizing radiation is presented. 7 of these 9 were under the age of 16 years when irradiation was given. Estimated maximum dose to the thyroid in these children ranged from 100 r to 2700 r. 5 of the 7 received radiation therapy for nevi, one for keloid and one for eczema. Neoplasms developed 5 to 18 years after irradiation. The histologic classification of these tumors included 6 patients with papillary carcinoma (one had in addition follicular carcinoma) and one with papillary adenoma. The evidence that irradiation was etiologically related to the development of the thyroid neoplasms is discussed. —W. W. Sutow.

## PSYCHOLOGY

**367. ADAMS, J. STACY.** (Stanford Univer., Calif.) **Advice seeking of mothers as a function of need for cognition.** *Child Developm.*, 1959, **30**, 171-176. It was hypothesized that mothers with a comparatively high need for cognition would more frequently seek information or advice about behavior problems in their child from physicians than would mothers with low need for cognition, whereas no such differentiation would exist with respect to advice seeking from psychological and school counselors. The test of the hypothesis was conducted by interview with 95 mothers who had at least one child in the first grade. The hypothesis was fully confirmed. The findings were discussed in the context of drive reduction theory. —Author's Summary.

**368. AKUTAGAWA, DONALD** (Governor Bacon Health Center, Delaware City, Delaware), & **BENOIT, E. PAUL.** **The effect of age and relative brightness on associative learning in children.** *Child Developm.*, 1959, **30**, 229-238. This study was concerned with the comparative efficiency with which children of different age and measured intelligence levels learn tasks of differing degrees of difficulty. Deductions from Hebb's formulations concerning the relative importance of age and intelligence were tested. Four different groups of boys of different age and IQ levels were used in this study, performing paired associate tasks presented by the anticipation method with correction. The results of the investigation fully supported the deductions in two cases and partially confirmed two others. A gradual, consistent, and statistically significant increase in efficiency of performance with age in simple associative learning

tasks was found. Although the trends were somewhat similar in the case of learning efficiency and intelligence, the results were not significant. The expectation that learning efficiency is a simple function of measured intelligence was not borne out. These findings are interpreted as supporting Hebb's theoretical formulation. —Authors' Summary.

369. ARNAUD, SARA H. (Univ. of Pittsburgh, Pa.) **Some psychological characteristics of children of multiple sclerosis.** *Psychosom. Med.*, 1959, 21, 8-22. On the basis of theoretical expectations, buttressed by a preliminary investigation, the individual Rorschach records of 60 children of MS patients were compared with those of 221 control children to determine the relative incidence of certain psychological characteristics, each of which was defined in terms of a number of Rorschach indices. The children were of both sexes and ranged in age from 7 to 16 years. The affected parents were 20 men and 16 women who had suffered MS in moderate to severe degree from 3 to 17 years; the experimental children had been exposed to the parental illness for a mean of 7.2 years (SD 2.5). As had been hypothesized, children of multiple sclerosis scored higher than children from homes without chronic illness in the following categories: body concern ( $P < .01$ ), dysphoric feelings ( $P < .01$ ), hostility ( $P < .01$ ), constraint in interpersonal relations ( $P < .01$ ), and dependency longings ( $P < .001$ ); and they showed a higher incidence of a pattern of false maturity ( $P < .01$ ). In the category of general (diffuse) anxiety, the scores of the MS children were significantly higher than those of the controls between the ages of 7 and 12 years ( $P < .05$ ), but when the adolescent group was included the differences fell to nonsignificance ( $P < .10$ ). Among 9- to 16-year-old children of multiple sclerosis, the false-maturity pattern tended to be accompanied by enhanced dependency longings ( $P < .01$ ) and to occur more often in girls than in boys ( $P < .05$ ). Age and sex differences in how these variables were manifested appear consistent with certain aspects of general psychologic and psychoanalytic theory. —Author's Summary.

370. BARANYAI, E. H. (Hungarian Academy of Sciences, Budapest) **Verbal comprehension in Hungarian children of 8-10 years.** *Brit. J. educ. Psychol.*, 1958, 28, 262-265. The development of children's understanding of what they read and assessment of the appropriateness of their school books was studied by means of a test of comprehension of words and phrases taken from the reading books used by children aged between 8 and 10 years in Hungarian schools. The results showed a general growth in comprehension with age, and a wide difference in ability associated with social class and with rural and urban populations. They also showed that the school readers were too difficult for most children and were inappropriate for those in rural areas. —Author's Summary.

371. BERLYNE, D. E. (Center Advanced Study in Behavioral Sciences) **The influence of the albedo and complexity of stimuli on visual fixation in the infant.** *Brit. J. Psychol.*, 1958, 49, 315-318. Subjects were 14 infants, aged 3 to 9 months. An experimenter held up before each subject a series of pairs of cards which varied in darkness and design. The experimenter did not know which pair he was holding up on any trial, but called out "right" or "left" according to the card that the infant fixated first. Results indicate that (a) "differences in albedo did not affect the direction of the first fixation," and (b) "two patterns . . . were more likely than others to attract first fixations." These two are designs having more contour than others in the series, suggesting the importance of high excitation of ganglion cells in the eye which respond only to onset or termination of illumination. —R. N. Walker.

372. BERNYER, G. **Quelques effets de la sélection, de l'âge et de la formation professionnelle sur l'organisation de facteurs psychologiques.** (Some effects of selection, age, and professional training on the organization of psychological factors.) *Biotypologie*, 1958, 19, 32-57. The results of a battery of 14 tests administered once to 160 candidates for admission to a trade school were compared with the results for 116 pupils before and after the three-year training period. The mean age

of all subjects was 15 years. Several methods were used. After centroid factor analyses (Thurstone) were performed, the oblique structures were found to be rather similar in all three analyses. The same conclusion can be reached from a comparison of the results of Burt's group factor method. When the correlations between the first order factors were analyzed, the results do not show the same degree of similarity. Burt's method of subdivided factors showed differences and is therefore thought to be more suitable for the study of differences between groups. Placing his faith more in the latter methods, the author concludes with Thomson that the factors are mere classification principles and possess no further meaning. —S. G. Vandenberg.

**373. BIJOU, SIDNEY W.** (Univer. of Washington, Seattle), & **STURGES, PERSIS T.** **Positive reinforcers for experimental studies with children—consumables and manipulables.** *Child Developm.*, 1959, **30**, 151-170. This is an analysis of the kinds and ways consumables (edibles and drinkables) and manipulables (toys, trinkets and hobby items) may be used in experimental studies with normal and deviant children from preschool age to preadolescence. Attention is also given to some of the conditions influencing their effectiveness such as age and situational factors such as experimental task, instructions, method of presentation, and the like. In addition to summaries there are concrete suggestions for experimental procedures. —Authors' Abstract.

**374. BOOTH, E. G., Jr.** **Personality traits of athletes as measured by the MMPI.** *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1958, **29**, 127-138. In this investigation of college students athletes scored significantly higher on the interest variable of the Minnesota Multiphasic Personality Inventory than did nonathletes. Freshman athletes, freshman nonathletes, and upper-class nonathletes were significantly higher on the anxiety variable; varsity athletes and upper-class nonathletes exceeded the freshman athletes and nonathletes on the dominance variable. On the social responsibility variable upper-class nonathletes scored higher than the others. Varsity athletes who participated only in individual sports had higher scores on the depression variable than did those who participated in team sports. 22 items that discriminate significantly between poor and good athletic competitors were selected from the 550 items of the MMPI. —H. H. Clarke.

**375. BOUSFIELD, W. A., ESTERSON, J., & WHITMARSH, G. A.** (Univer. of Connecticut, Storrs) **A study of developmental changes in conceptual and perceptual associative clustering.** *J. genet. Psychol.*, 1958, **92**, 95-102. This study deals with developmental changes in associative clustering when subjects are given the alternatives of clustering on the basis of conceptual categories of meaning or perceptual categories of color. The subjects were 20 college students, 17 children 10 years of age, and 15 children 9 years of age. The names of 25 objects were printed below their colored pictures and exposed on a screen with instructions to recall as many items as possible in the order of their occurrence in memory. Clustering was indicated by sequences of recalled items belonging in the same category of meaning or color. Older subjects showed a greater total amount of clustering and recalled more stimulus-items than the younger ones. The trend of results for percentage of color clustering paralleled Rorschach norms for Sum C scores. It was concluded that the extent of use of any specific basis for the organization of responses must depend not only upon the nature of alternative modes of organization, but also upon simultaneously operating sets or attitudes. —From Authors' Summary.

**376. BRIGANTE, THOMAS R.** (Brockton VA Hospital) **Adolescent evaluations of rewarding, neutral and punishing power figures.** *J. Pers.*, 1958, **26**, 435-450. This investigation was designed to explore certain experimental and personality factors influencing subordinates' responses to power figures. In the first study, 27 males, 13 to 16 years of age, were asked to provide solutions to five problem stories. Five judges of varying "power" to add (rewarder) or subtract (punisher) from the amount of money Ss received prior to starting the experiment rated each of the solutions according to a predetermined random pattern of positive or negative reinforcement.

Ss tended to rate the "rewarder" as more friendly than either the neutral or punishing figure. The solutions obtained one week later indicated the neutral figure had exerted more "influence" than either of the other two figures. For the second experiment, 50 males, 12 to 14 years of age, with high interest in sports (as determined by a preference scale) were individually interviewed by three judges of varying "power" (add or subtract points) who asked questions regarding sports. Measures of the Ss agreement with their fathers' disciplinary practices (Shoben scale) and the degree of inferiority feelings (Heidbreder scale) were also obtained. The data suggest both of these variables affect an individual's attitude toward power figures as well as the accuracy of their perception of the power distribution (among the judges). —C. D. Smock.

**377. BURCHINAL, LEE G.** (Iowa State Coll., Ames) **Parents' attitudes and adjustment of children.** *J. genet. Psychol.*, 1958, **92**, 67-79. The purpose of the study was to determine if there is a positive relationship between certain parental attitudes toward children and the personality adjustment characteristics of the children. The sample consisted of 50 fifth grade children and their parents taken from a city in central Iowa. The tests used were the Porter parental acceptance scale, the Shoben parental attitude survey, the California Test of Personality, Elementary Series, 1953 revision, and the Rogers Test of Personality Adjustment. None of the relationships between parental attitude scores and children's personality adjustment scores were significant except two, which were opposite in direction from what had been predicted. Several factors which might have contributed to the lack of association were discussed. —From Author's Summary.

**378. CALOGERAS, ROY C.** (New Jersey State Diagnostic Center, Menlo Park) **Some relationships between fantasy and self-report behavior.** *Genet. Psychol. Monogr.*, 1958, **58**, 273-325. The present study constituted an attempt to compare systematically certain dimensions of intra-family attitudes on the level of fantasy, as measured by the Thematic Apperception Test (TAT), and self-report behavior, as measured by direct, indirect, and interview data-collection techniques. . . . 57 high school boys (10th graders) of average to superior intelligence, ranging in age from 14 years 1 month to 15 years 8 months, were studied. No assumptions were made as to the representativeness of the sample as regards the general high school population of students. The procedure followed in administering the different data-collection techniques was divided into three phases: the TAT was administered in groups of from 5 to 10 Ss using slightly modified standard instructions; the direct and indirect attitude questionnaires were given at one sitting; the interview was conducted on an individual basis oriented around 11 general questions dealing with intra-family problems and situations. . . . The general hypothesis tested in this study was accepted. That is to say, a significant as well as a direct relationship appears to exist between TAT derived intra-family attitudes and comparable attitudes measured by the self-report techniques. A more complex relationship was found between: (a) the degree of relationship occurring between the TAT and the different self-report techniques, and (b) the degree of relationship among the self-report techniques. In addition, interesting and pertinent adjunctive correlation increases occurred, between the TAT and the different self-report measures, when Authority-Subject responses on the TAT were combined with their corresponding Parent-Subject responses. As a whole, the majority of the significant correlations obtained were undoubtedly too low to be of value in individual prediction, although their value in indicating group prediction and trend relationships for this type of data was clearly indicated. —From Author's Summary.

**379. CATTELL, R. B.** (Univer. of Illinois, Urbana), & **COAN, R. W.** **Personality dimensions in the questionnaire responses of six- and seven-year-olds.** *Brit. J. educ. Psychol.*, 1958, **28**, 232-242. This report deals with a preliminary investigation of the questionnaire behavior of children at the 6- to 8-year level. A factor analysis of the data revealed that the number of factors required to account for the responses of children in this age range is quite comparable to what has been found at the adult and late-childhood levels. The factors appear in nature to be generally similar to those which have been reported for older groups. Tentative designations are offered



for some of the factors, but complete identification depends on additional information which will be considered in later publications. —Authors' Summary.

**380. COAN, RICHARD W. (Univer. of Arizona), & CATTELL, RAYMOND B. Reproducible personality factors in middle childhood.** *J. clin. Psychol.*, 1958, **14**, 339-345. A 200-item questionnaire was administered to 181 first- and second-grade children. Two overlapping factor analyses, utilizing responses to 172 of the items, yielded 18 obliquely rotated factors (or aligned factor pairs). These factors were compared with 18 factors obtained in a prior independent study. 11 factors from either study were found to correspond reasonably well with 11 factors in the other study. Examination of the apparently stable factors reveals trends related to each of the following factors known from studies of older subjects: A (Schizothymia vs. Cyclothymia), D (Infantile Emotionality vs. Phlegmatic Frustration Tolerance, E (Ascendancy vs. Submissiveness), G (Superego Strength), H (Adventurous Cyclothymia vs. Withdrawn Schizothymia), I (Premia or Emotional Sensitivity), K (Dislike of Education vs. Socialized Morale), O (Anxious Depression), and  $Q_4$  (Nervous Tension). Later publications will report the construction of a factored questionnaire instrument based on our present work and relations found between our stable factors and factors derived from other kinds of data. —Authors' Summary.

**381. COHEN, JOHN, DEARNALEY, E. J., & HANSEN, C. E. M. (Univer. of Manchester, England) Skill and chance: variations in estimates of skill with an increasing effect of chance.** *Brit. J. Psychol.*, 1958, **49**, 319-323. Experiments with three groups of subjects, ranging in age from 13 to 20 years, were carried out to determine how estimates of success in performance are influenced by (a) varying the subjective assessment of the degree of skill required to succeed in a task, and (b) varying the degree of subjective chance. The findings were as follows. . . . The result of introducing an element of subjective chance into a task requiring some skill is to make the estimates of success in the task progressively reflect the element of subjective chance as it increases in magnitude. . . . This effect occurs regardless of the degree of skill subjectively to be required for the task. . . . The values of subjective probability of success in performance given by the older subjects are not significantly different from the products of their corresponding values of [the estimate of success due to skill] and [the estimate of success due to chance]. . . . In the case of younger subjects, aged 13 to 14 years, the subjective probabilities of success in performance are somewhat larger than the products of the two separate subjective probabilities. This may be due to a tendency on the part of younger persons to be more confident of success when their estimates relate to a single situation involving two sources of uncertainty as compared with when they relate to two separate situations, each involving its own source of uncertainty. —From Authors' Abstract.

**382. COSTELLO, C. G. (Regina General Hospital, Saskatchewan, Canada) Aphasic cerebral palsied children's wrong answers on Raven's "Progressive Matrices."** *J. clin. Psychol.*, 1959, **15**, 76-77. In order to study the effectiveness of the Progressive Matrices for assessing the intellectual level of physically handicapped brain injured children, the author presents the results of a comparison, with regard to one type of wrong answer, between a group of cerebral palsied children suffering from aphasia and/or related intellectual disturbances and a group of children with post-polio residual paralysis. This study was based on the author's observation that the cerebral palsied child with aphasia chooses unusual wrong answers. Two groups (cerebral palsied and post-polio) each containing 10 children were matched for age and Matrices score. The frequency with which a child committed the particular error under study was expressed as a percentage of all his errors. It was found that the post-polio control group committed this error more frequently than the cerebral palsied group. Due to the small N, no statistical analysis was made. —A. M. Kaplan.

**383. CRUMP, E. PERRY, GORE, PEARL M., & HORTON, CARRELL P. (Meharry Med. Coll., Nashville, Tenn.) The sucking behavior in premature infants.** *Hum. Biol.*, 1958, **30**, 128-141. Three types of observations were made in the hospital nursery. First, maximum rate of water intake during the first three days of life

was measured in 52 Negro female premature infants. The test was made at the 9 a.m. feeding using a 30 cc. graduated bottle with a soft rubber nipple with an opening 2 mm. in length. A stop-clock was set when the infant began sucking, and the amount of water taken in a two-minute interval recorded. Second, maximum sucking efficiency during the first three days of formula feeding was determined for the 52 premature infants and for 32 normal newborn Negro infants. The premature infants were tested from the fourth to sixth day of life; the full-term infants, during the first three days. The procedure was identical to that for the water intake, except that a 20 calorie/ounce evaporated milk formula was used. Third, maximum sucking rate was studied in the premature group in the same manner for periods of from 9 to 57 days beyond the first postnatal week. During the first three postnatal days, premature infants ingested water at a mean maximal rate of 0.16 cc/sec. Heavier babies had a stronger and more effective sucking reflex and higher maximal rates. The sucking rate of premature infants averaged 50% less than that of full-term babies during the first week of life. There was no relationship between weight and maximal sucking rate in full-term infants. Data for calculating gestational age was available for 23 premature infants. Within this group there was no relationship between gestational age and maximal sucking efficiency. Sucking efficiency in premature infants improved regularly with age. Maximal sucking efficiency was reached, on the average, by 15 days among infants weighing 2000-2500 gm. at birth; by 30 days for those with birth weights of under 2000 gm. —D. H. Eichorn.

**384. DIXON, J. C. (Univer. of Florida, Gainesville) Reactions of superior and feeble-minded children to an illusion.** *J. genet. Psychol.*, 1958, **93**, 79-85. This study compares how mentally retarded and superior children react to an illusion which poses a conflict between perception and expectation. A group of 30 superior nursery school children and 60 retarded children were the subjects. These two groups were each divided into three equal groups on the basis of Stanford-Binet MA at levels 4, 5, and 6. Retarded subjects were further divided into a young and old group at each MA level. The task was the ring-segments illusion. Resolving the conflict by choosing the segment as larger which presently appeared larger, rather than the one which had appeared larger initially, was more characteristic of increasing MA than CA. Choice was shown to be susceptible to set, irrespective of MA or CA, but more so for retarded than for superior children. —J. W. Fleming.

**385. DURKIN, DOLORES. (Univer. of Calif., Berkeley) Children's acceptance of reciprocity as a justice-principle.** *Child Developm.*, 1959, **30**, 289-296. The major purpose of this study was to evaluate the validity of Piaget's proposal concerning children's increasing acceptance, with age, of reciprocity as a justice-principle. Piaget's subjects, of various ages, were questioned about story situations which depicted violations of justice in terms of physical aggression; subjects in this study, also varying in age, were questioned about story situations which depicted justice-violations in terms of violations of property rights and character rights. The distribution of reciprocity responses, on the basis of age, for the two different groups of subjects was then compared. A secondary purpose of this study was to examine the relationship between a child's level of intelligence and his acceptance of reciprocity. Findings in the study showed that: (a) Acceptance of reciprocity as a justice-principle, contrary to Piaget's proposal, decreased as the chronological age of subjects increased. (b) Acceptance of reciprocity did not appear to be related to a child's level of intelligence. This lack of relationship was consistent throughout the different age levels. —Author's Abstract.

**386. DURKIN, DOLORES. (Univer. of Calif., Berkeley) Children's concepts of justice: A comparison with the Piaget data.** *Child Developm.*, 1959, **30**, 59-67. Subjects of three different age groups, in individual, tape-recorded interviews, were questioned about the problem of restoring right order in instances of physical aggression depicted in stories. Their responses were examined in order to identify developmental trends in solutions proposed and, further, to compare such trends with those described by Piaget as being basic to the evolution of a sense of justice in the child.

The function of intelligence was also examined. Findings were: (a) Data supported Piaget's proposal of a relationship existing between a child's CA and his concept of justice, but did not support his more specific proposal that acceptance of reciprocity as a justice-principle increases with age. (b) As Piaget has suggested, subjects who accepted reciprocity did not approve of returning aggression that was different from the aggression received. (c) Older subjects tended to show concern for possible mitigating factors in the situation being judged, supporting Piaget's finding concerning the emergence of what he calls "equity" with increase in age. (d) Data concerning the relationship between intelligence and concepts of justice were conflicting; however, they did support the hypothesis of no relationship between intelligence and "equity." —Author's Abstract.

**387. DURRETT, MARY ELLEN.** (San Jose State Coll., Calif.) **The relationship of early infant regulation and later behavior in play interviews.** *Child Developm.*, 1959, **30**, 211-216. This study used 60 4- and 5-year-old children and their mothers to investigate the relationship between fantasy aggression in young children and the degree of regulation in their infant feeding schedules, the timing of and methods used in their toilet education, and the methods of discipline and guidance used in specific situations. The frequency of aggression was measured in two 20-minute sessions of standard doll play interviews with each of the 30 boys and 30 girls. The early regulation data were ratings obtained in interviews with the children's mothers following the completion of the two doll play sessions. It was found that boys exhibited significantly more physical aggression than did girls, while girls displayed significantly more verbal aggression than did boys. The frequency of spankings given boys by mothers and fathers was significantly greater than that given girls. The findings of earlier investigations were confirmed in that, in both doll play sessions, boys were more aggressive than girls, and for both sexes, there was an increase in the amount of aggression from the first to the second session. No statistically significant relationship was found between aggression and the early regulation measures. Intercorrelations among early regulation measures were, with few exceptions, low and positive. —Author's Abstract.

**388. ESPENSCHADE, ANNA.** **Fitness of fourth grade children.** *Res. Quart. Amer. Ass. hlth. phys. Educ., Rec.*, 1958, **29**, 274-278. The purpose of this study was to compare performances of fourth grade children on the Kraus-Weber Test of Minimum Muscular Fitness with those on the California Physical Performance Test. The subjects were fourth grade children in 7 of the 15 elementary schools of Berkeley, California. The results showed that children who failed one strength test item or any two or more items on the K-W test make lower scores on the average in running, jumping, throwing, and sit-ups than do those who pass all K-W items; the difference was significant in all events for boys but only in the throw for girls. Significantly more Negro boys and both Negro and white girls passed the K-W test than did white boys; however, if the floor-touch test is omitted, no significant sex or race differences were found. —H. H. Clarke.

**389. ESTVAN, FRANK J.** (Univer. of Wisconsin, Madison) **Studies in social perception: methodology.** *J. genet. Psychol.*, 1958, **92**, 215-246. The rationale, special requirements, method of construction, and procedure for a technique to be used in studying social perception in children are presented. A Life-Situation Picture Series was devised consisting of 14 scenes encompassing various social backgrounds, social functions, and perceptual processes. The series was administered to 88 subjects, half of whom were drawn in equal proportions from first and sixth grade children attending one room schools in a rural Wisconsin county, the other half being similarly selected from the first and sixth grade pupils attending the public elementary schools of an urban Wisconsin community. The data were analyzed quantitatively and qualitatively in order to estimate the success of the technique in eliciting productive protocols, reducing the influence of extraneous factors, and enlisting the interest and motivation of elementary school children. One complete case description is included. —J. W. Fleming.



390. GEBER, M. (Makere Coll., Uganda) **Tests de Gesell et de Terman-Merrill appliques en Uganda.** (The application of the Gesell and Terman-Merrill tests in Uganda.) *Enfance*, 1958, 1, 63-67. These tests have been used in Africa: for 1 month to 6 years, the Gesell, and the Terman-Merrill over 3 years of age. A very interesting description and discussion follows giving the results of such testing and stating how the tests will need to be adapted for these conditions in order to be used to greatest advantage and to follow certain necessary criteria. —F. Falkner.
391. GRAHAM, LEO R. (2680 Saturn Ave., Huntington Park, Calif.) **The maturational factor in humor.** *J. clin. Psychol.*, 1958, 14, 326-328. This study hypothesizes that there is a relationship between perception of humor and level of growth and personality development. A total of 60 children with equal representation from the first, third, and fifth grades of the Fresno State College Elementary Demonstration School were selected. All of the children were white, American-born, monolingual, and urban from upper or upper-middle class homes. 11 pages, each containing four cartoons, was presented to each child. He was asked to select the funniest cartoon on each page. If two cartoons were selected, they were asked to choose one. Humor was defined as "any object or situation, or any part of an object or situation, which would elicit, directly or indirectly, the language response, 'This is funny,' or some equivalent expression." The significance of the group differences was tested by the chi square technique. The *p* values indicate statistical significance beyond the .001 level of confidence, thus upholding the hypothesis being tested. The author presents a brief discussion of the results. —A. M. Kaplan.
392. GRATCH, GERALD. (Illinois Neuropsychiatric Inst., Chicago) **The development of the expectation of the nonindependence of random events in children.** *Child Developm.*, 1959, 30, 217-227. Children 6, 9, and 11 years old predicted the top card on each deck of a sequence of 12 decks. The first six decks had five cards marked with a square and four with a diamond. The others had seven cards with a square and two with a diamond. The children were told the composition of each deck before they guessed. The Ss of ages 6 and 9 tended to alternate their choices on each successive trial on both kinds of decks and this seemed to be due to a belief that the cards should be "fair." The Ss of age 11 did not alternate their choices so often but they did predict that squares and diamonds would never occur more than twice in succession. Further they seemed to be trying to match the probability of the square and diamond in the two kinds of decks. The relation to adult's behavior was discussed. —Author's Abstract.
393. GRAY, SUSAN W. (George Peabody Coll., Nashville, Tenn.) **Perceived similarity to parents and adjustment.** *Child Developm.*, 1959, 30, 91-107. Relationships between perceived similarity to parents and indices of personal and social adjustment were studied in children in the fifth through eighth grades of a laboratory school. Two indices of identification were used: the direction of identification toward or away from the same-sex parent, and the distance from both parents combined. An interaction effect was predicted between direction of identification and sex, identification with the father being associated with adjustment in the boy, while in the girl identification with the mother would not be so associated. A modified Mann-Whitney U test was used for the analyses. A significant interaction was obtained in four of the six over-all tests. Tests of simple effects suggested that the direction of identification was a more important factor in the boy's adjustment than the girl's. It was further predicted that there would be an interaction between grade level and perceived distance from parents. Four of the six over-all tests of interaction proved significant. In the examination of simple effects, no consistent pattern emerged. The study is interpreted as indicating the importance of changed role expectancies for women today and of the pressure toward emancipation from parents in young adolescents as mediating variables in determining patterns of identification in the age groups studied. —Author's Abstract.
394. HAFNER, A. JACK (Univ. of Minnesota, Minneapolis), & KAPLAN, ARTHUR M. **Children's manifest anxiety and intelligence.** *Child Developm.*, 1959, 30, 269-271. The children's manifest anxiety scale was administered to 108 fifth

grade children of the St. Louis Public Schools who had a mean Otis Beta IQ of 103.8 with an SD of 10.62. A low but significant ( $p = .05$ ) negative correlation ( $r = -.21$ ) was found between anxiety and intelligence. No relationship was found between the L scale and intelligence, and no sex differences were found in regard to anxiety or L scale scores. —Authors' Abstract.

**395. HARRIS, DALE B.** (Univer. of Minnesota, Minneapolis) **Parental judgment of responsibility in children, and children's adjustment.** *J. genet. Psychol.*, 1958, **92**, 161-166. A scale of 12 items designating the parents' view of child responsibility was included in a questionnaire on child rearing attitudes and methods. Parents recorded responses with respect to particular children on whom data from several personality and adjustment schedules were available. Children evaluated by their own parents as high in responsibility were contrasted with those rated as low in responsibility on these several measures. Few significant differences appeared, and these were scattered unsystematically through several age and residence groups. However, parental judgment of child responsibility was consistent with the parents' report of such things as children's assumption of duties, and ease in getting children to complete their tasks. These findings were contrasted with the positive association noted between adjustment and personality measures on the one hand, and on attitude test and teachers' rating criterion of responsibility on the other. An interpretation was offered that parents are not in the best position to make judgments about responsibility which reflect the child's impress on the larger social world. Their judgments become confounded with their own successes and failures in the intimate relationships of discipline, guidance, and affection which constitute the parental role. —From Author's Summary.

**396. HISKEY, MARSHALL S., & SADNAVITCH, JOSEPH M.** (Kansas State Teachers Coll., Pittsburg) **Minimizing exaggerated changes in Binet ratings of retarded children.** *Except. Child.*, 1958, **25**, 16-20. The purpose of this study was to compare the initial Stanford-Binet results of mentally handicapped individuals with the results of a second evaluation after a specified lapse of time. The subjects were 201 mentally retarded persons. For the initial comparisons Stanford-Binet scores were used, but for subsequent comparisons Binet scores were converted to standard scores. Significant differences were found between the means of the original scores and non-significant differences between the standard scores. Differences were highly significant when a time interval of two years or more between tests occurred, but were nonsignificant after score conversion. In their original form the scores indicated a significant decrease in IQ, but when converted the standard scores showed no significant difference. The findings seem to support the use of standard scores for the comparison of an individual's performance in a test-retest situation at different ages. —From Authors' Summary.

**397. HUNT, BETTY, & PATTERSON, RUTH M.** (Columbus State School) **Performance of brain-injured and familial mentally deficient children on visual and auditory sequences.** *Amer. J. ment. Def.*, 1958, **63**, 72-80. This study was concerned with the abilities of mentally retarded children to arrange auditory and visual materials into proper sequences. 26 brain-injured children were paired with 26 familial children. The range in CA was 8 to 17 years, the mean MA about 6.5, the mean IQ about 52. Visual material required the subjects to arrange sets of pictures to tell a story. Measures of auditory ability were obtained from the recall and comprehension of a series of orally presented stories. A third section, combining visual and auditory materials, required the subjects to arrange pictures while a story was being read, or to tell a story about a series of pictures. Familial children performed significantly better on all three sections. A combination of visual and auditory items resulted in higher performance by both groups. A significant number of brain-injured children received lower scores in the area of their greatest disability. Correlation coefficients between MA and performance on the three individual sections and on total scores ranged from .43 to .69. Numerous qualitative observations, and psychological and educational implications are included. —J. W. Fleming.

398. ILLINGSWORTH, R. S. (Univer. of Sheffield) **Dissociation as a guide to developmental assessment.** Arch. Dis. Childh., 1958, 33, 118-122. A discussion of the importance of relating one developmental milestone to the other. When development in one field is out of step with the other, dissociation has occurred and the reasons for this unbalance are presented. Motor, speech, muscle development; sphincter control, chewing and manipulation; and social behavior are all covered. The significance of such dissociation is discussed. —F. Falkner.
399. IRWIN, ORVIS C. (Univer. of Iowa, Iowa City) **Correct status of initial double consonant blends in the speech of children with cerebral palsy.** Cerebral Palsy Rev., 1958, 19(6), 6-13. A list of 23 blends of initial double consonants was presented to 102 cerebral palsied children aged 3 to 16. The mean correct scores from CA level 3-4 to 15-6 varied irregularly from 10.1 to 17.6. Mean sex differences in correct articulation were not found but girls showed significantly greater variability. The mean score for hemiplegics exceeded that for paraplegics, and the latter was greater than that for quadriplegics. No relationship was found with degree of involvement. A direct association between mean articulation score and general speech and language ability was noted. —I. Altman.
400. KOPPITZ, ELIZABETH MUNSTERBERG. (Children's Mental Health Center, Columbus, Ohio) **Relationships between the Bender Gestalt Test and the Wechsler Intelligence Test for Children.** J. clin. Psychol., 1958, 14, 413-416. This study explores the relationships between the WISC, FSIQ, VIQ, PIQ, and nine WISC Subtests with Bender Composite Scores calculated by the Koppitz scoring system. 90 elementary school children served as Ss. They were first through fourth grade students and had a mean IQ of 95. All were clinic or private patients referred for psychological evaluation because of behavior or learning problems. Statistical analysis revealed a highly significant relationship between the Bender and the WISC PIQ, FSIQ, VIQ, Arithmetic, and all performance subtests with the exception of Coding. These relationships show marked changes at different grade levels. Information, Comprehension, and Similarities do not appear to be related to the Bender. Learning problems in the first and second grades seem to be primarily related to immaturity in visual motor perception as measured on the Bender Gestalt Test and the WISC PIQ; on the third and fourth grade level, verbal factors and general intelligence, as well as visual motor perception, appear to be closely related to learning problems. —Author's Summary.
401. LAMBERT, PHILIP. (Orinda Union School District, Orinda, Calif.) **Interaction between authoritarian and nonauthoritarian principals and teachers.** Genet. Psychol. Monogr., 1958, 58, 163-206. 40 teachers and 20 principals were selected from a sample of 425 principals and teachers on the basis of scores on the F scale. The 60 subjects were placed in 20 groups of 3 people. Each of the groups contained a high and a low scoring teacher (upper and lower quartile respectively). 10 groups contained a high scoring principal, and 10 a low scoring principal. The groups were asked to discuss a question on discipline and on curricula. The content of the discussions was coded in terms of the types of attitudes and beliefs expressed in the discussion, not the actual interactions among the three people. The findings generally agree with the differences found in other studies of the F Scale. High scorers tend to express more reverence for rule and tradition and authority and to view the world as more hostile than low scorers. Low scorers talk in terms of specific cases and tend to express gradations of opinions rather than to be black or white. —A. L. Baldwin.
402. LARCEBEAU, S. **Étude d'un questionnaire d'intérêts pour garçons de 10 à 12 ans.** (Study of an interest questionnaire for 10 to 12 year old boys.) BINOP, 1958, 14, 232-254. A factor analysis of the responses of 268 boys aged 10 to 11 years on 72 questions concerning activities led to factors concerned with technical interests, intellectual interests, interests in sport and physical activities, interests in nature, social interests, commercial interests, interest in manual activities such as

hobbies and art work, interests in reading, theatre and radio. The complete questionnaire is given as well as some preliminary norms. —S. G. Vandenberg.

**403. LAWSON, REED, & MARX, MELVIN H. Frustration: theory and experiment.** *Genet. Psychol. Monogr.*, 1958, **57**, 393-464. The theoretical and experimental material pertinent to frustration was reviewed. The experimental data were found to deal chiefly with (a) reactions in a frustrating situation or (b) reactions in another situation (usually nonfrustrating) following frustration experience. The greatest research void was the lack of studies relating reactions in one frustrating situation to previous behavior in other frustrating situations. The outstanding characteristic of this area is the large number of systematic, semantic, and methodological problems that are still unsolved. There are, however, certain trends and fairly well-supported generalizations that may be noted. The major trend in frustration theory is the emphasis on some form of a "two-factor" theory. Essentially, this view holds that frustration results in (a) a momentary increase in motivation and/or (b) the occurrence of stimuli for responses that interfere with the response involved in a frustration situation. . . . There is more evidence ostensibly supporting the view that frustration often increases motivation than for any other single principle, save one . . . namely that a group of Ss is nearly always more variable in performance following frustration than before. . . . Regarding the relation of frustration to emotional behavior, . . . one possibility is that some instances of what we call emotional behavior are unconditional responses to specific stimuli, some of which may be included in the "interfering stimuli" hypothesized to occur during frustration. . . . Evidence for the occurrence of interfering stimuli is of two major types: (a) the decreased effect of practice when actual or apparent failure is interpolated, and (b) the decreased perceptual acuity following frustration. . . . The greatest gap in frustration research exists at the point where it seems most important to have knowledge: the effect of one frustration experience upon reactions in a subsequent one, as well as upon other, nonfrustrated behavior. —From Author's Summary and Conclusions.

**404. LEHMANN, IRVIN J. (Michigan State Univer.) Responses of kindergarten children to the Children's Apperception Test.** *J. clin. Psychol.*, 1959, **15**, 60-63. The Children's Apperception Test (CAT) was given to 160 kindergarten children from four different socioeconomic areas in an attempt to learn (a) the manner and extent to which certain dynamics of personality are elicited by the pictures of the CAT, (b) whether the pictures elicited the themes for which they were designed, and (c) whether there are any statistically significant differences among the four groups in the themes investigated. 33% of the initial responses were descriptive in nature while 67% were interpretive. The theme of orality was most pronounced and that of sibling rivalry was not mentioned by the subjects. It would seem that the dynamic of orality is most important and more adequately explored at this age level than are the dynamics of aggression, fear, toileting and cleanliness, and punishment. It is also evident that for the subjects, at least, some of the pictures elicit dynamics they were not designed to elicit while the converse is true for other pictures. When differences among the groups for each dynamic were tested, it was found that only one was significant beyond the 1% level of confidence—this was for the theme of fear where the children from the high group exhibited more fear than those from the low-broken group in terms of frequency of responses. —Author's Summary.

**405. LESSER, GERALD S. (Hunter College) Application of Guttman's scaling method to aggressive fantasy in children.** *Educ. psychol. Measmt.*, 1958, **18**, 543-552. A scale of fantasy aggression scores was constructed from the projective responses of 72 adolescent boys. To the degree to which this was possible it provides evidence for the unidimensionality for the underlying trait. A special set of TAT pictures was prepared, which is being described in the paper. —S. G. Vandenberg.

**406. LEVINSON, BORIS M. (Yeshiva Univer.) A comparison of the performance of bilingual and monolingual native born Jewish preschool children of traditional parentage on four intelligence tests.** *J. clin. Psychol.*, 1959, **15**, 74-76. The Revised Stanford Binet, Form L, the Wechsler Intelligence Scale for Children, Goodenough

Draw-a-Man Test, and the Progressive Coloured Matrices were administered to 57 native born monolingual and to 60 native born bilingual preschool Jewish children of traditional parentage. Both groups had good command of English and the test results were considered valid by the examiners. There was no correlation between socioeconomic background and intelligence for both groups. The Goodenough Draw-a-Man Test; Information, Comprehension and Similarities of the WISC Verbal Scale; Picture Completion, Block Design, Object Assembly and Coding of the WISC Performance Scale were found to give fair estimates of the ability of the native born bilingual Jewish children. —Author's Summary.

**407. LIPSITT, LEWIS P.** (Brown Univer., Providence, R. I.), **CASTANEDA, ALFRED, & KEMBLE, JOAN DANSKIN.** **Effects of delayed reward pretraining on discrimination learning of children.** *Child Develpm.*, 1959, **30**, 273-278. Two groups of 17 preschool children, matched for age and sex, received 20 rewarded trials to each of two distinct colors. The experimental Ss received immediate reward to one color, and reward after a delay to the other. Reward was immediate to both colors for the control Ss. There was no significant difference in speed of response to the two immediately rewarded stimuli in the control group. A significant difference in response speed to the delayed and immediately rewarded stimuli, however, was found in the experimental group at the end of pretraining. All Ss were subsequently tested in a color-discrimination task, in which the stimulus associated with immediate reward (for the experimental Ss) in the pretraining task was now correct for all Ss. Ss learned by the noncorrection method and were immediately rewarded for correct responses. Experimental Ss took significantly fewer trials to reach criterion and made significantly more correct responses in the first 20 trials. Differential delayed reward pretraining apparently serves to facilitate learning in a transfer task involving the discrimination of the pretraining stimuli. —Authors' Summary.

**408. LORD, FREDERICK M.** (Educational Testing Service) **Further problems in the measurement of growth.** *Educ. psychol. Measmt*, 1958, **18**, 437-451. This is a discussion of the problem of estimating the true gain in spite of errors of measurement and perhaps unequal interval width in different parts of the scale. —S. G. Vandenberg.

**409. MACCOBY, ELEANOR E.** (Harvard Univer., Cambridge, Mass.) **Role-taking in childhood and its consequences for social learning.** *Child Develpm.*, 1959, **30**, 239-252. "In summary, we have proposed that a child acquires a repertoire of actions by practicing covertly the actions characteristic of the adults with whom he interacts most frequently and who control the resources that he needs. Certain of the response-tendencies thus acquired may not manifest themselves overtly until a much later time. Specifically, actions which are part of adult-role behavior (e.g., to discipline a child) will remain latent until a situation arises in which the individual can appropriately play the adult role, sometimes even until the child himself becomes a parent. We have suggested that not all features of parental behavior are equally well learned by the child through covert role-practice; he should learn verbal behavior more efficiently than motor skills by this means, and may learn the responses of others while failing to learn the cues which guided the responses. And finally, we have suggested that covert role-playing is a means of learning not only adult-like social actions directed toward others, but of learning reactions toward the self."

**410. McNEMAR, QUINN.** (Stanford Univer., Calif.) **On growth measurement.** *Educ. psychol. Measmt*, 1958, **18**, 47-55. Formulas are given for estimating true gain from initial and final scores. The author polemizes with F. M. Lord. —S. G. Vandenberg.

**411. MARCHAL, G.** (Centre d'Orientation Professionnelle à Lens) **Contribution à l'étude du sentiment esthétique.** (Contribution to the study of esthetic judgments.) *BINOP*, 1958, **14**, 82-93. The choices of 340 14-year-old boys among 16 color reproductions are presented. The subject matter determined the preference most often,



the colors next. Pictures were most often rejected because of the implications or meaning of the content, next because of the composition. Comparisons of the results for 5 schools indicate that the distributions of choices are quite similar which indicates that the results are highly reliable. On a new group of 915 boys and using 16 new pictures which all portrayed landscapes, the results for children of above average, average, and below average intelligence agreed highly ( $r = .91, .88, .97$ ) which indicates that esthetic preferences are not systematically influenced by intelligence. —S. G. Vandenberg.

**412. MAYSHARK, CYRUS. Critical analysis of attitude measurement in health education, 1927-1957.** Res. Quart. Amer. Ass. hlth phys. Educ., Rec., 1958, **29**, 309-319. In this report 15 attitude scales in health education which have appeared in the literature between 1927 and 1957 are critically reviewed. The author concluded that this 30-year period had added little to a better understanding at attitude measurement in this field. —H. H. Clarke.

**413. MILLS, JUDSON. (Stanford Univer., Calif.) Changes in moral attitudes following temptation.** J. Pers., 1958, **26**, 517-531. The purpose of this study was to test Festinger's cognitive dissonance hypothesis; specifically, that children who decide not to violate a moral standard will become more, whereas those who cheat will become less, severe in their attitude toward cheating. Level of motivation to cheat and external restraints on cheating were predicted to influence the magnitude of cheating. Children in 24 6th grade classes were administered an attitude questionnaire before and after participating in a contest (dot-counting or number circling) in which it was possible to cheat. Value of the prize and opportunity to cheat were varied systematically. In general, the results tend to support the major hypothesis, although the effects of the motivational and restraint variables were not clear-cut. —C. D. Smock.

**414. MYERS, FRANK H. A safety attitude scale for the seventh grade.** Res. Quart. Amer. Ass. hlth phys. Educ., Rec., 1958, **29**, 320-332. This study presents the construction of a scale to measure the attitudes of seventh grade students toward safety practices. Two forms of the test were developed; each form contains 60 situation-response items with four responses provided for each situation. Three general areas, school, community, and home, were selected for the scale after analyzing the prevalence of accidents in the 1954 edition of the National Safety Council's "Accident Facts." The major steps followed in constructing the scales were: selecting a measuring technique, developing a preliminary scale, refinement of this scale through item validity processes, and establishment of the final forms and norms. The correlation between results obtained by the two forms was .897. —H. H. Clarke.

**415. NASH, HARVEY. (Northwestern Univer. Med. Sch., Chicago, Ill.) Stereotyped associations to schematic faces.** J. genet. Psychol., 1958, **93**, 149-152. Adolescents' associations to schematic faces are compared with results Halstead obtained with adults. The judges were 44 boys, CA 11 to 16. The stimuli were nine schematic faces used by Halstead, who selected them from larger groups of faces employed by Brunswik and Reiter, and by Samuels. The judges were asked to select the face which best represented each of 14 characteristics, which in turn represented polar extremes of seven variables. 12 out of 14 of the characteristics show agreement among adolescents greater than would be expected by chance. Although the adolescents show the stereotyped behavior reported by previous investigators, their degree of agreement is exceeded by Halstead's normal adults 11 times out of 14. This difference "... suggests that the stereotyped associations found in adults are present, but not yet firmly established, in adolescence." —J. W. Fleming.

**416. OWEN, WAYNE A. (Conn. State Hospital, Middletown) Effects of motivating instructions on reaction time in grade school children.** Child Developm., 1959, **30**, 261-267. The purpose of this study was to determine the effects of three types of motivating instructions, viz., standard, urging, relaxing, on choice RT in school

children. The sample consisted of 60 boys and girls between 7 and 9 years of age. 30 visual choice RT trials were administered under standard conditions followed by differential instructions and by 30 postinstructional trials. The criterion score was the difference in mean time scores between the 30 preinstructional and 30 postinstructional trials. The following results were obtained: (a) a significant main effect for instructions was found; (b) the standard instructional condition resulted in a significant loss in speed of performance as compared with preinstructional performance and differed significantly in its effect from the urging instructional condition but not from the relaxing instructional condition; (c) the urging instructional condition resulted in a significant gain in speed of performance as compared with preinstructional performance and was significantly different in its effect from each of the other two instructional conditions; (d) the relaxation instructional condition did not result in a significant change in speed of performance, as compared with preinstructional performance; (e) there was no significant difference between boys and girls in absolute level of initial choice RT performance. —Author's Abstract.

**417. PAREEK, UDAI.** (Nat'l. Inst. Basic Educ., New Delhi) **Some preliminary data about the Indian adaptation of Rosenzweig P-F Study (Children's Form).** *Educ. & Psychol.*, 1958, 5, 105-113. The pictures of the Children's Form of the Rosenzweig P-F were redrawn to depict the figures in Indian clothing and setting, and the captions were translated into Hindi, with some adaptations to make them meaningful to Indian children. This form was administered to 1002 children, aged 4 to 13 years, in Delhi schools. Extensive tables of age distributions for the different schools are presented. Average time for completion is the only variable for which results are presented. Time for group administration seems unusually long in some schools, but this seems to have no interpretive significance in the case of Indian children. —R. N. Walker.

**418. PETERSON, DONALD R.** (Univer. of Illinois, Urbana), & **CATTELL, RAYMOND B.** **Personality factors in nursery school children as derived from parent ratings.** *J. clin. Psychol.*, 1958, 14, 346-354. 80 children in a metropolitan university nursery school were rated by their parents in respect to 43 variables. Reports of teachers were obtained for an additional variable and the entire set intercorrelated. 14 factors were extracted, and after an initial orthogonal solution had been reached through use of the quartimax routine for electronic computer, two independent series of rotations to oblique simple structure were carried out. One of these entailed knowledge of item content at one point in the process; the other was "blind" throughout. The factors reported represent the best single solution to emerge from both kinds of rotational procedure. Factors were compared in the usual quasi-judgmental way with those isolated in earlier investigations, and were matched statistically with the factors reported in a previous study of parent ratings on 6- and 7-year-old children. Results further confirmed the now rather well-established proposition that personality structure in young children is not radically different from personality structure in older children and adults. Seven factors (G, Super Ego Strength; K, Comention vs. Abcultion; O, Guilt Proneness vs. Confidence; I, Premisia vs. Harria; H, Parmia vs. Threctia; C, Ego Strength vs. Proneness to Neuroticism; and A, Cyclothymia vs. Schizothymia) could be recognized with reasonable clarity and bore a statistically demonstrated resemblance to similarly identified factors in the study of 6- and 7-year-olds. Five others (D, Excitability-Insecurity; E, Dominance vs. Submissiveness; M, Autia vs. Praxernia; L, Protension vs. Inner Relaxation, and a putative "oldest child" factor evidently unique to young children) presented a variety of interpretative problems, and only tentative identifications were made. In two cases (F, Surgency-Desurgency, and J, Coasthenia), it was suggested that interpretations given in the report on 6- and 7-year-olds be reconsidered in the light of new information gained in the present study. In spite of the general resemblance between the early patterns reported herein and those found in more mature individuals, certain disparities occurred. Some of these probably represent systematic, age-related modification in personality expression, and a number of hypotheses were offered in reference to such apparent developmental changes. —Authors' Summary.

**419. PHILLIPS, BEEMAN N., KING, F. J., & McGUIRE, CARSON.** (Univer. of Texas, Austin) **Studies on anxiety: I. Anxiety and performance on psychometric tests varying in complexity.** *Child Developm.*, 1959, **30**, 253-259. The purpose of the study was to determine relationships between anxiety and performance on psychometric tests varying in complexity. On the basis of the theoretical formulations of Taylor, Spence, and others, it was hypothesized that the relationships would be highest for the simpler, less complex tests and progressively lower for the more complex tests. The Ss were 956 adolescents selected from the population of the Human Talent Project at the University of Texas. Tests which were administered included the McCandless Anxiety Scale, CTMM, Mutilated Words, Gestalt Completion, Four Letter Words, Writing Lack, Gestalt Transformation, Vocabulary Completion, Dotting, Writing X's, Discrimination Reaction Time, and Copying. A rank ordering of the 10 tests according to complexity was obtained using five judges, and a high degree of agreement was indicated by the W value which was obtained (.86). Correlations between anxiety and performance were computed with the effects of intelligence partialled out. Only two of the correlation coefficients reached statistical significance, and these were significant only because of the very large size of the sample. In view of these findings, it was concluded that anxiety does not have differential effects on performance on psychometric tests varying in complexity when the influence of intelligence is eliminated from the relationship. In addition, some speculations were made concerning the possible effects of level of anxiety, sex, social class status, and intelligence on the influence of anxiety on psychometric test performance. —Authors' Abstract.

**420. ROSENBLITH, JUDY F.** (Brown Univer., Providence, R.I.) **Learning by imitation in kindergarten children.** *Child Developm.*, 1959, **30**, 69-80. The effectiveness of learning by imitation was studied in a context which permitted examination of a number of variables relevant to learning and identification theories. These were: (a) the effectiveness of having a leader or model as contrasted with experience in the absence of a model; (b) the effectiveness of the sex of the leader and of the leader's sex in relation to that of the child; (c) the effectiveness of the adult leader who gives attention to the child for the entire period preceding the imitation, as contrasted with the adult who pays attention to the child for half the time and withdraws attention for the remaining half. In general, having a model was more effective than merely having additional trials. There were important differences between the effectiveness of the male leader and the female leader. The male leader was, in general, more effective. There were also important differences between boys and girls. Boys showed more improvement. Girls seemed less sensitive to the experimental manipulations. There was a tendency for attention to be more effective than withdrawal of attention except in the case of boys with a male leader. The specific findings were examined in detail and their relation to current theories discussed. Analysis of variance on the male and female leader parts of the study combined showed effects of: (a) treatments, (b) sex of Ss, (c) initial or pretest level of Ss' performance on the mazes, and (d) interaction between the sex of Ss and the treatments. —Author's Summary.

**421. ROSENBLUM, SIDNEY** (Wayne Co. Training Sch., Northville, Mich.), & **CALLAHAN, ROGER J.** **The performance of high-grade retarded, emotionally disturbed children on the children's manifest anxiety scale and children's anxiety pictures.** *J. clin Psychol.*, 1958, **14**, 272-275. The present study reports the performance of 30 boys and girls in residence at the Wayne County Training School on two measures purporting to tap "manifest anxiety," the children's manifest anxiety scale (CMAS), a questionnaire-type test adapted from the Taylor anxiety scale of adults, and the children's anxiety pictures (CAP), a projective-type test consisting of black and white ambiguous figures. The subjects in the study were part of larger project investigating tranquilizing medications, were all adjudged emotionally disturbed, and were considered free from neurological signs as determined by medical examination. The following tentative conclusions seem warranted by the data obtained: (a) There is a tendency for a population of high-grade retarded, emotionally disturbed girls



to score significantly higher than a comparable group of boys on the CMAS. No such differences appear on the CMAS L scale or the CAP. (b) Individual administration of the CMAS, necessitated by the limited reading skills of the subjects, tends to produce a defensive set in the children, raising a question as to the validity of the low-anxiety scores thus obtained. (c) Children who tend to falsify their CMAS responses apparently are not doing so on the CAP. (d) There is clinical evidence to suggest that the CAP is a less threatening measure for our children than is the CMAS when individually administered. (e) Although further research is required, there are suggestive data to indicate that for a population of high-grade retarded, emotionally disturbed children the CAP is a more useful and practical instrument than is the CMAS with which to investigate so-called "manifest anxiety." —Authors' Summary.

**422. RUDEL, RITA G., & LIEBERT, ROBERT S.** (N. Y. Univer.-Bellevue Med. Center, New York City) **Auditory localization and adaptation to body position: a developmental study.** *Child Developm.*, 1959, **30**, 81-90. In normal adults body tilt produces displacements in localization of stimuli in vision, touch, audition. When required to set a rod vertically, using sight or touch, an adult tends to displace the rod in a direction opposite to his body tilt; analogous displacements occur on localizing an ambient sound source. Young children differ from adults, on the visual task, by showing no compensatory displacement. The tendency develops progressively from ages 6 to 19. The present study extends these developmental studies by investigating, in normal children (a) effects of body tilt on auditory localization; (b) adaptation to body tilt. Subjects were 36 boys and 36 girls, ages 5-7 to 17-6 years. In the first experiment Ss adjusted an ambient sound source to the subjective median plane. S adjusted the source, while blindfolded, from 4 starting positions and in 3 body positions. In the second experiment, after being tilted, Ss were slowly brought back to the position in which they reported feeling upright. With age, there is progressive displacement in the position of the subjective auditory midline from 0° to 6° opposite to body tilt. The youngest children considered themselves upright when tilted an average of 14° to the side of the tilt. This error diminished to 4° (in the same direction) for the oldest group. The experiments are complementary: younger children adapt more readily to body tilt, and exhibit less compensatory displacements in locating a sound source while tilted. —Authors' Abstract.

**423. SHEDD, CHARLES L.** (Berea College, Kentucky) **An exploratory study of the concept of quantity: discrimination of continuous and discontinuous quantities.** *Educ. & Psychol.*, 1958, **5**, 121-136. At each of 12 age levels from 1½ to 9 years 10 boys and 10 girls were presented 96 cards for discrimination of continuous quantities and 387 for discrimination of discontinuous quantities. For continuous quantities, subjects were asked to choose the "biggest" and "littlest." Correct choices increased with age, with neither "biggest" nor "littlest" developing in advance of the other. At all ages discrimination was based on gross dimensional features; color, arrangement, and shape did not affect performance. The developmental sequence was as follows: discrimination of two quantities of large size difference; discrimination of two quantities of moderate or slight size difference; discrimination of more than two objects of large, moderate, or slight difference. For discontinuous quantities, the ability to discriminate "more" and "less" appeared at 4 years and continued to develop up to 8 years. The developmental sequence was as follows: discrimination when the number of objects in two groups was objectively different, the arrangement was linear, and there was equal density between objects; discrimination of more, less, and the same when two sets of objects were presented linearly and randomly, with different and the same densities between objects in each group. —R. N. Walker.

**424. SIEGEL, ALBERTA ENGVALL** (Pennsylvania State Univer., University Park), & **KOHN, LYNETTE GAYLE.** **Permissiveness, permission, and aggression: The effect of adult presence or absence on aggression in children's play.** *Child Developm.*, 1959, **30**, 131-141. Session differences were observed in children's aggression in play in the presence of a permissive adult and in the absence of any adult. Subjects were four-year-old boys, and each was observed in social play in the com-

panionship of a younger boy, in two sessions separated by two days. Under random assignment, half the pairs' two sessions were in the presence of a nonjudgmental and accepting friendly adult and half were in the absence of any adult. Two-thirds of the subjects under the adult-present condition were more aggressive in their second than in their first session, and all of the subjects under the adult-absent condition were less aggressive in their second than in their first sessions. These session differences by condition, significant at  $p < .01$ , suggest that adult behaviors intended to be permissive (nonjudgmental, accepting) may be interpreted by young children as being in fact affirmatively judgmental, and that previous explanations of session-to-session increases in aggression in play in the presence of an adult as reflecting only reduction of fear or decrease of inhibition in the child are inadequate. —Authors' Abstract.

425. SOUEIF, M. I. (Maudsley Hospital, London) **Extreme response sets as a measure of intolerance of ambiguity.** *Brit. J. Psychol.*, 1958, **49**, 329-333. A Personal Friends Questionnaire was administered to 1028 Egyptian subjects, aged 12 to 46 years. Extreme response scores, proposed as a measure of intolerance of ambiguity, were obtained by counting the number of +2 and -2 scores among the 70 5-step ratings made by each subject. Corrected split-half reliabilities of extreme response scores were .92 for both males and females. It was hypothesized that social groups with high tension level would tend to earn high extreme response scores. Thus, it was expected that (a) adolescents would score higher than adults, (b) Christians (a minority group) would score higher than Moslems, (c) females would score higher than males, (d) lower middle class subjects would score higher than upper middle class subjects. The first prediction was clearly significant, the second was significant for females but not for males. The third prediction was supported for adults but apparently not for adolescents. The fourth was tested only for subgroups of Moslem male adolescents, with the prediction confirmed. —R. N. Walker.

426. SPIKER, CHARLES C. (Univer. of Iowa, Iowa City), & WHITE, SHELDON H. **Differential conditioning by children as a function of effort required in the task.** *Child Developm.*, 1959, **30**, 1-7. This experiment studied the effects of effort and experience upon preschool children's learning of a differential conditioning problem. In a procedure where Ss responded freely during discrete trials, two stimuli were alternated in irregular sequence, with responding to only one of them reinforced by marble delivery. Each S in Group L had the response handle adjusted to require a force of one-third of a maximum effort previously obtained from him. Ss in Group H had the response handle adjusted to two-thirds of their maximum. Subgroups of experienced and naive Ss were distinguished. It was found that a higher percentage of the responses of Group L Ss in comparison with Group H Ss, and of experienced Ss in comparison with naive Ss, was given to the positive stimulus. These findings were analyzed using response rates to the positive and negative stimuli taken separately. —Authors' Abstract.

427. STEIN, HARRY. (N. J. State Hospital, Marlboro) **Age, physical disability and responsivity in relation to spontaneous rotation of Rorschach cards.** *J. proj. Tech.*, 1958, **22**, 450-452. The purpose, relevant to development, of the present study was to compare the relationship between age and the spontaneous turning of Rorschach cards. The Rorschach was administered to 60 "normal" children, 10 boys and 10 girls at three age levels, 8, 12, and 16 years. Rorschach responses and rotations scores were also obtained from 44 physically disabled Ss who were nevertheless able to rotate the cards, ranging in age from 15 to 65 years. The results showed a significant positive relationship between age and amount of turning in the 8 through 16 year group, but a slight negative, although not significant, relationship in the disabled group. —L. Harrell.

428. WAHL, C. W. (Sch. Med., UCLA, Los Angeles, Calif.) **The fear of death.** *Bull. Menninger Clinic*, 1958, **22**, 214-225. Part of this article deals with children's fear of death. Here the author focuses on children from 1 to 4. In children the concept of death is a composite of mutually contradictory paradoxes. Death is not origi-

nally seen as something to happen to the child himself, yet he will ask: if strong adults die, how can weak children survive? Death is not conceived as resulting from chance or natural causes. Children experience the death of an adult as an abandonment and therefore react with anger rather than grief; but they also believe, magically, that death is brought about by wishing, and that the law of talion will visit similar disaster on the wisher. The fear of death and the concept of its reversibility give rise to many symbols which we can also follow in folk tales. The author states that adults' own anxieties about death let them bypass children's urge to know "whither do I go." The same taboo prevails here that used to prevent the frank giving of sex information, and the author suggests that it also may be removed. —E. N. Plank.

429. WALTERS, RICHARD H., & ZAKS, MISHA S. **Changes in responses to a set of personality-inventory items as a function of age.** J. consult. Psychol., 1958, 22, 458. A 160-item personality inventory was administered to 69 15-year-olds and 100 adults. On 21 items the adolescents agreed significantly more often; these were administered to groups of high school children. A significant age trend was found. The authors interpret their results as a warning that the use of adult norms to interpret adolescent inventory protocols may result in inaccuracies. —E. E. Levitt.

430. WANG, JAMES D. (Galesburg State Hosp., Illinois) **The relationship between children's play interests and their mental ability.** J. genet. Psychol., 1958, 93, 23-34. The purpose of this study was to explore relationships between children's expressed play interests and their intellectual level. The subjects were rural and urban fourth, fifth, and sixth grade children of both sexes. Intellectual level was estimated by 20 multiple-choice questions. The children expressed their likes and dislikes to a play inventory of 108 items. Swimming and going to the movies were the only activities showing a progressive increase in interest with increasing intelligence for both sexes. In general, with increased brightness there is an increased interest in active play and a decrease of interest in immature forms of recreation. Many other trends suggesting differences between relatively bright and dull children are discussed. It is concluded that mental ability is not the factor of major significance in the determination of breadth of play interests. —J. W. Fleming.

431. WEILAND, I. HYMAN, & STEISEL, IRA M. (Eastern Pa. Psychiatric Inst., Philadelphia) **An analysis of manifest content of the earliest memories of children.** J. genet. Psychol., 1958, 92, 41-52. The purpose of the study was to explore the usefulness of analyzing the manifest content of earliest childhood memories. The subjects were 95 children, ages 5 to 18, who were considered to be emotionally disturbed. In individual sessions each subject was asked to report his earliest childhood memory. Each memory was analyzed with respect to the presence or absence of 17 characteristics. This procedure was followed for the total sample, when the subjects were grouped on the basis of clinical diagnosis, and when they were grouped in terms of their manner of handling conflicts. The statistically significant characteristics were the frequency of mention of geographic location, and dating the memories as occurring in the Oedipal years. It was concluded that the method of analyzing manifest content is limited, and that "... the most appropriate method to use ... (is) that of considering the significance of the material to the subject in terms of psychodynamics rather than to try to analyze the items of the manifest content out of context." —J. W. Fleming.

432. WEIR, M. W., & STEVENSON, H. W. (Univer. of Texas, Austin) **The effect of verbalization in children's learning as a function of chronological age.** Child Developm., 1959, 30, 143-149. Children of CAs 3, 5, 7, and 9 were trained to discriminate the correct member of five pairs of stimuli. Half of the Ss were instructed to name the stimulus prior to a response, while the other half learned the task without these instructions. Consistently better learning in the verbal groups and a curvilinear relationship between rate of learning and CA were obtained. The difference in rate of learning between the verbal and nonverbal groups was not found to vary significantly with CA. —Authors' Abstract.

**433. WILLIAMS, META F. Acceptance and performance among gifted and elementary school children.** *Educ. Res. Bull.*, 1958, **37**, 216-220, 224. The author attempts to study the influence of acceptance of others as well as acceptance by others on the performance of gifted children. A sample was drawn of 117 children whose IQ on the California Test of Mental Maturity was 130 or more. Academic performance was measured with the Stanford and Metropolitan Achievement Tests. The California Test of Personality was used to test "social performance." A classroom social-distance scale was used to establish the extent of acceptance. This scale was given to 888 children, a total comprising the 117 gifted children and a random sample of their classmates. Academic and social performance scores were analyzed by a correlation ratio ( $\eta^2$ ), by chi square, and by numerical comparison. The most pronounced  $\eta^2$  correlation occurred between academic performance and acceptance extended by the gifted children to the group. In a further test of the findings the author selected six of the most highly accepted gifted children, and six of the highly rejected ones for special study. The Van Pelt Series-Wishes was administered and the results given considerable attention in the article. The author concludes that there is a close relationship between acceptance and satisfaction of needs. The children who had higher acceptance scores seem to admit that their needs were met to a greater extent than children with lower acceptance scores. "If schools make a greater effort to fulfill the needs of gifted children by strengthening acceptance, in all probability, the performance of such children will thereby be improved. —A. Grams.

**434. WILLIAMS, WALTER C. The PALS Tests: A technique for children to evaluate both parents.** *J. consult. Psychol.*, 1958, **22**, 487-495. This paper describes the development of the Parental Authority-Love Statements (PALS), an instrument for the measurement of the child's perception of his parent along these two dimensions. The instrument has two parts, a verbal rating scale, and a cartoon-type projective. Only items on which at least 90% of an interdisciplinary group of raters agreed were included in the test. Both parts of the test were found to differentiate between groups of acting-out and normal children. —E. E. Levitt.

**435. WITSAMAN, L. R. (State Hospital, Logansport, Ind.), & JONES, REGINALD L. Reliability of the Columbia Mental Maturity Scale with kindergarten pupils.** *J. clin. Psychol.*, 1959, **15**, 66-68. The Columbia Mental Maturity Scale was administered to 391 kindergarten pupils ranging in age from five years, four months to seven years, two months. Obtaining an unusually large number of pupils with IQs of 130 and higher led to further study and statistical analysis of the data. As a result, a randomly selected group of 34 pupils, representative of the original distribution, was retested. In addition, the mean IQs of the local group at the five- and six-year-old levels were compared with those for the standardization group at these levels. 14 pupils were subsequently administered the Stanford-Binet Intelligence Scale, Form L. The findings suggest that the CMMS is not reliable at the kindergarten level. It is concluded that the test requires further study and standardization before it can become an instrument to be used with confidence. —Authors' Summary.

**436. WOLFF, PETER H. (Children's Medical Center, Boston, Mass.) Observations on newborn infants.** *Psychosom. Med.*, 1959, **21**, 110-118. The findings of continuous systematic observations on 4 newborn infants were reported, with emphasis on motor patterns in sleep, on reactions to external stimulation, and on responses to need tension. A tentative explanation was presented that sought to relate the observed types of behavior to one another in terms of energy and threshold concepts. The various behavior forms were classified according to their sources and according to their presumptive connections with functions of the more fully differentiated personality: (1) Motor activity initiated by neural excitation, that is, by spontaneous activity of the central nervous system. To this category seem to belong startles and possibly other motor activity in sleep but none of the other observed behaviors. (2) Diffuse motor activity initiated by need tension or external stimuli, from which the later "acquired" behavior forms will differentiate. To this category would belong most of the motor activity during waking and possibly that during ir-

regular sleep, but not, for example, the various kinds of mouthing or the pursuit movements. (3) Reflexly organized executive functions initiated by need tension such as hunger. Rooting and nutritive sucking would belong to this group and perhaps some of the hand sucking and mouthing before meals, but not crying or pursuit movements. (4) Need-"motivated" expressive movements which are reflexly organized precursors of affect expression. These would include crying and probably the smile and pre-cry face, but not spontaneous startle or sucking. (5) Practice behaviors (in Piaget's sense) that are at first reflexly organized and become stabilized through repetition. Once stabilized, they may be utilized either as need executive or as "voluntary" adaptive functions; they probably include hand sucking and mouthing after meals, but not startles or diffuse movements in sleep. (6) Voluntary activities, which are at first reflexly organized, and elicited by external stimuli and which later become intentional. The visual and auditory pursuit movements and possibly the arrest of activity upon stimulation may be the first reflex predecessors of voluntary activity, whereas hunger crying probably is not. Although motor behavior in the neonatal period if justifiably considered undifferentiated, it may be concluded from this study that differentiated reflex predecessors of several behavior forms are already distinguishable in the first few days after birth. —Author's Summary.

437. ZUK, G. H. (St. Christopher's Hospital for Children, Philadelphia) **Sex-appropriate behavior in adolescence.** *J. genet. Psychol.*, 1958, **93**, 15-32. This study involved an analysis of everyday behaviors of 99 boys and girls of the Adolescent Growth study for the purpose of investigating changes in sex-appropriateness of behavior during the adolescent years from 15 to 17. Measures of everyday behavior were taken from the subjects' responses to the U.C. Activity Record, an inventory comprising about 200 items covering Things I did last week, Where I went last week, What I read last week, and Radio Programs I listened to. Sex-appropriateness was established empirically by determining for each behavior whether it was participated in by a greater number of boys than girls each of the many times the inventory was administered over a three year period. 66 behaviors were thus isolated. Several measures of psychobiological variables were also employed to investigate correlates of sex-appropriate behavior. The results were that sex-appropriate behavior increased significantly in girls from 16 to 17 years, and tended to be more stable in girls from year to year. Behaviors which were sex-appropriate and more popular with boys tended also to be relatively more popular with girls, and vice versa. Sex appropriate behavior was shown to be related in reasonable directions but in low degree with social, physical, intellectual, and temperament factors. Sex-appropriateness was shown to vary widely from one area of sociosexual behavior to another. —J. W. Fleming.

#### PSYCHIATRY AND MENTAL HYGIENE

438. ABBE, ALICE E. (Queens College, Flushing, N.Y.) **Maternal attitudes toward child behavior and their relationship to the diagnostic category of the child.** *J. genet. Psychol.*, 1958, **92**, 167-173. The problem explored was the relationship between maternal attitudes and children's diagnostic categories. The subjects were 66 disturbed children, ages 5 to 17, and their mothers, and 18 nondisturbed children, ages 6 to 12, and their mothers. The mothers were classified as restrictive, lax and overindulgent, moderate or inconsistent, on the basis of an attitude survey and case histories. The children's categories were neurosis, simple maladjustment, primary behavior disorder, and normal adjustment, as determined by clinical tests and measurements widely used in child clinics. The mothers of disturbed children showed a higher incidence of restrictive and lax and overindulgent attitudes than the mothers of children who were making a normal adjustment. The mothers of neurotic children did not reveal a higher incidence of restrictive attitudes than the mothers of disturbed children otherwise classified. The mothers of children with primary behavior disorder did not reveal a higher incidence of lax and overindulgent attitudes than the mothers



of disturbed children otherwise classified. Research problems encountered in exploring relationships between parental attitudes and child adjustment are discussed. —J. W. Fleming.

**439. BAIN, KATHERINE, FAEGRE, MARIAN L., & WYLY, ROBERT S. Behavior of young children under conditions simulating entrapment in refrigerators.** *Pediatrics*, 1958, **22**, 628-647. Behavior of 201 preschool children was observed in a situation simulating entrapment in a refrigerator to develop standards for inside releasing devices in accordance with Public Law 930 of the 84th Congress. Success in escaping related to a child's CA, size, and behavior. Children most often tried to escape by pushing on door through which they entered or by manipulating a release knob. Three-fourths of children released selves in less than three minutes; one-fourth in less than 10 seconds. Behavior observed: inaction (24%); purposeful effort to escape (39%); violent action directed toward escape (37%). Interviews with mothers of 96 children after eight months indicated no reversion to infantile behavior and little obvious residual effect. —M. C. Templin.

**440. BEHRENS, MARJORIE L., & GOLDFARB, WILLIAM.** (Henry Ittleson Center for Child Research, New York City) **A study of patterns of interaction of families of schizophrenic children in residential treatment.** *Amer. J. Orthopsychiat.*, 1958, **28**, 300-312. Rating scales were devised and applied to observations of family patterns of interaction and family functioning in 30 families. 20 of these had a child in residential treatment, including 15 diagnosed as schizophrenic and 5 as behavior disorders. 10 families had relatively normal children living at home. The scales made it possible to differentiate among family groups. The results of the study show that (1) families of schizophrenic children in residential treatment differ significantly from families who have relatively normal children; (2) the adequacy of family functioning is linked to diagnostic differences between schizophrenic children and those with reactive behavior disorders in residential treatment; (3) greater variability in functioning among different categories of family interaction is associated with relative inadequacy of the level of family functioning. The study suggests a positive relation between the child's social environment created by family interaction and functioning and the pathology of the child. The implication is that further study of the total family groups of normal children and of children with varying kinds and degrees of pathology will significantly add to our knowledge of deviant behavior in children. —Authors' Summary.

**441. BEILIN, HARRY.** (Brooklyn Coll., Brooklyn, N.Y.) **Teachers' and clinicians' attitudes toward the behavior problems of children: a reappraisal.** *Child Developm.*, 1959, **30**, 9-25. Studies of teachers' and clinicians' attitudes toward behavior problems of children, stimulated principally by the Wickman 1928 monograph, are reviewed. It is concluded that: (a) Differences existed in 1927 between the attitudes of teachers and clinicians toward behavior problems in spite of the methodological limitations of the Wickman study. (b) Since 1927 there has been a shift in the hierarchy of teacher attitudes to approximate more closely those of clinicians. In spite of this shift the essential differences still exist, i.e., teachers are more concerned about classroom management problems; clinicians, about withdrawing and other "recessive" behaviors. These differences in attitudes are interpreted as reflecting the role functions and expectations of the respective groups. The changes in teachers' attitudes which have occurred since 1927 are due to the changes in the teacher's role since that time. It is suggested that because of the teacher's task-orientation and the clinician's adjustment-orientation complete or near complete congruence in their attitudes toward behavior problems is not likely to be achieved. (c) The relationship of sex (of teacher and child) and age (of child or adolescent) to attitudinal differences is also interpreted in light of role theory. —Author's Abstract.

**442. BLOCK, JEANNE** (Univer. of Calif.), **PATTERSON, VIRGINIA, BLOCK, JACK, & JACKSON, DON D.** **A study of the parents of schizophrenic and neurotic children.** *Psychiatry*, 1958, **21**, 387-397. This report describes a psychometric comparison of parents of schizophrenic and neurotic children who were in treatment



at the Langley Porter Clinic. 20 pairs of parents of schizophrenic and 20 pairs of parents of neurotic children were given the Rorschach, the MMPI, and the TAT. The samples were matched for age of child (within 3 years), age of parents in relation to age of child, number of children in the family, education and socioeconomic level of the parents, and participation by the mother in psychotherapy. The test data were converted to statistically useful form by employing independent Q-sorts from three raters. Combined interrater agreement was fairly high. The Q-sorts were further transmitted in additional analyses by cluster analysis and factor analysis. The authors point out the extreme difficulty in research which requires very large populations to obtain very small subsamples. In order to obtain their samples, four years of study were required. Comparisons were made between stereotypes of schizophrenogenic mothers and the data collected in this study on the mothers of schizophrenic children. Similar comparisons were made for neurotic mothers and for fathers. Q-sorts of parents of schizophrenic and neurotic children were compared with each other and clusters within each were compared. These analyses showed few items which discriminated pairs. Discrimination of mothers was more successful than for fathers. The cluster analysis showed a grouping of items for mothers of neurotic children indicating that these women were tentative, pervaded by guilt and worry, in need of reassurance, and tended to develop physical symptoms as a response to stress; while mothers of schizophrenic children were distrustful, hostile, exploiting, manipulative women. The evidence for correlated personality characteristics of fathers was less clear but suggested that rather than fitting the stereotype of the ineffectual male these fathers ended to be ambitious and counterphobic. —R. Wirt.

443. BRADLEY, J. EDMUND, & BAUMGARTNER, RUTH J. (Univer. of Maryland Sch. Med.) **Subsequent mental development of child with lead encephalopathy, as related to type of treatment.** *J. Pediat.*, 1958, 53, 311-315. Two to five years after hospitalization, nine BAL-treated cases of lead encephalopathy showed similar general intelligence, inferior performance on visual motor tests, and greater frequency of visual-motor impairment than nine EDTA-treated cases. —M. C. Templin.

444. BROWN, DANIEL G. (U.S. Air Force Academy, Colo.) **Inversion and homosexuality.** *Amer. J. Orthopsychiat.*, 1958, 28, 424-429. The terms inversion and homosexuality are often used synonymously in the professional literature. This paper has emphasized the necessity of distinguishing between these phenomena and suggests that the term "inversion" refer to the personality structure of the individual, not to the direction or object of sexual gratification as such. It is hypothesized that inversion is most commonly based on an early and persistent identification-attachment to the parent of the opposite sex which results in the child's incorporating and adopting the role-model of the opposite sex. It is also hypothesized that inversion is more common among males than females. A theoretical rationale is provided for this hypothesis and evidence pertaining to the sex ratio of individuals desiring to change their sex is cited in this connection. —Author's Summary.

445. BRUCH, HILDE. (Coll. Physicians & Surgeons, Columbia Univer., New York City) **Psychological aspects of obesity in adolescence.** *Amer. J. publ. Hlth.*, 1958, 48, 1349-1353. The mistake is commonly made of looking upon obesity as a definite disease entity, but obesity and its allied symptoms are outward manifestations of a variety of underlying disturbances in weight and appetite regulation. Reasons for making the error are the high regard for statistics, though these ignore individual differences, and the derogatory cultural attitude toward any degree of overweight. Understanding of obesity is particularly important in dealing with adolescents "because this age group is most affected by the cultural and social rejection, the more so as obesity itself is often associated with the expression of severe underlying emotional disturbances." A number of case histories are presented to show the futility of reducing without resolution of the underlying problems. —I. Altman.

446. COLBERT, EDWARD G., & KOEGLER, RONALD R. **Toe walking in childhood schizophrenia.** *J. Pediat.*, 1958, 53, 219-220. Three cases are presented

briefly in emphasizing the importance of persistent toe walking as a sign in childhood schizophrenia. —M. C. Templin.

**447. CSANK, J. Z., & LEHMANN, H. E.** (Verdun Protestant Hospital, Montreal) **Developmental norms on four psychophysiological measures for use in the evaluation of psychotic disorders.** *Canad. J. Psychol.*, 1958, 12, 127-133. Preliminary to an attempt to evaluate regression phenomena in mental illness, four simple psychophysiological measures were standardized for age and sex on 336 healthy, normal subjects divided into nine age ranges between 5 and 80 years of age. Psychomotor performance (simple reaction time and speed of finger tapping) showed rapid developmental changes from 5 years of age to late adolescence, and a slight but steady decline from maturity onwards. Males were significantly superior in certain age ranges. Negative after-image performance showed more retarded development, with a sudden increase in the age range 20 to 24. This increase, like the decrease found in senescence, was accompanied by qualitative changes in the after-images. Flicker-fusion frequency, in contrast, reached its maximum levels very early, at 10 to 14 years. On the basis of this study norms were established for evaluating the same processes in psychotic patients. —From Authors' Summary.

**448. FILMER-BENNETT, GORDON** (Univer. of Portland), & **HILLSON, JOSEPH S.** **Some child therapy practices.** *J. clin. Psychol.*, 1959, 15, 105-106. In order to ascertain current child therapy practices, questionnaires were distributed to 298 outpatient child clinics. These were selected from the listing published by the National Association for Mental Health in 1952. 40% returned the completed forms. The number of clinics answering any particular question varied from 87 to 118. The trends included the following: 75% utilized psychoanalytic principles, 17% considered themselves nondirective, 5% directive, and 3% compromising between the directive and nondirective. When asked what authority most represented their thinking in relation to child therapy, 27% named Frederick Allen and 16% Anna Freud. Others included Sullivan, Kanner, Axline, and Erickson. 10% regarded themselves as eclectic. 26% utilized group therapy with children together with play media, while 18% engaged in group therapy without the use of any play activity. 41% regarded the psychological examination in pretreatment planning as a routine part of the diagnostic workup, while 49% used it frequently but not in every instance. 10% occasionally used the psychological examination. Age was not considered to be the primary determinant as to whether one would or would not include play activity as part of the treatment procedure. 68% indicated that they used play activity with children from 12 to 15 years, while 32% indicated that they used play activity with patients from 6 years of age to the mid-twenties. —A. M. Kaplan.

**449. FISCHER, LISELOTTE K.** (Johns Hopkins Univer., Baltimore, Md.) **The significance of atypical postural and grasping behavior during the first year of life.** *Amer. J. Orthopsychiat.*, 1958, 28, 368-375. Some evidence has been brought forth, and a few theoretical concepts have been suggested, to indicate the need for more study of the problem of distinction between organic and psychogenically triggered behavior abnormalities in early gross and fine motor behavior. These concepts are tentative, the evidence preliminary. The main hope that arises at this point is that we are learning to formulate more clearly and specifically what questions and problem groups need to be investigated in early infancy. We have come, I would hope, to the point where we are more interested in what infants really do, rather than to give "anthropomorphic" interpretations about what they "ought to feel" or overrigid developmental norms about what they "ought to do." The problems facing such new research are twofold: One is the question of finding suitable infants in large enough groups, and in situations which allow a reasonable period of follow-up. The other is the need to devise systems of description and classification of infantile behavior, as detailed, and whenever possible, even more detailed than those used in the usual clinical developmental examination, and allowing correlation with medical and social history material in a planned and quantifiable way. The task appears formidable but also fascinating, and if full cooperation can be established between the orthopsychiat-

ric professions and some of their close neighbors, particularly in pediatrics and neurology, as well as with public health and welfare groups, we may eventually be able to develop a differential diagnostic system which will allow the most appropriate early prophylaxis and/or rehabilitation in the largest possible variety of situations. —Author's Summary.

**450. GIBBENS, T. C. N.** (Inst. of Psychiatry, London) **The Porteus Maze Test and delinquency.** Brit. J. educ. Psychol., 1958, 28, 209-216. In order to test the usefulness of the Porteus Maze Test in discriminating between delinquent and non-delinquent male youths, 200 delinquents aged 16 to 21 sentenced to Borstal training were given the Porteus Maze Test, the Minnesota Multiphasic Personality Inventory, as well as a routine battery of other psychological tests. A control group of 51 17- to 18-year-old boys attending a day college were similarly tested. The results showed the delinquent boys to have significantly higher Q scores on the Porteus Maze Test than the controls, that high Q scores were related to intellectual dullness and to differences in verbal and performance test scores, to truancy, to large family size, and to poor prognosis as a delinquent. No significant relationships between Q scores and the scales of the Minnesota Multiphasic Personality Inventory appeared. —W. D. Smith.

**451. GRAHAM, E. E.** (Colo. State Dept. of Educ.), & **KAMANO, D.** **Reading failure as a factor in the WAIS subtest patterns of youthful offenders.** J. clin. Psychol., 1958, 14, 302-305. To test the hypothesis that youthful criminals who are able readers will not show the difference in verbal and performance subtests which has been described by Wechsler as typical of the youthful psychopath while criminals who are inadequate readers will produce such a psychogram, inmates of a federal correctional institution were divided by means of the Jastak Wide Range Achievement test into groups of successful and unsuccessful readers and were administered the Wechsler Adult Intelligence Scale. The 33 UR's were found to be inferior both to Wechsler's standardization group and to the 35 SR's in verbal subtests and Digit Symbol. Their psychogram is similar to that described as typical of the youthful psychopath. The SR's did as well on verbal as on performance subtests, and their psychogram does not resemble that considered typical of the youthful psychopath. Both groups achieved the highest scores in Picture Arrangement. —Author's Summary.

**452. HERSHER, LEONARD** (Coll. Med., State Univer. of N.Y., Syracuse), **MOORE, A. ULRIC, & RICHMOND, JULIUS B.** **Effect of post partum separation of mother and kid on maternal care in the domestic goat.** Science, 1958, 128, 1342-1343. 24 goat mothers were separated from their newborn kids for 1 hour immediately following birth. 2 months later these mothers were observed to nurse their own kids less and alien kids more than nonseparated mothers. Separation of mother and young in half the flock also resulted in abnormal "rejecting" behavior in some nonseparated mothers. —Authors' Abstract.

**453. KATZ, B. E.** **Education of cerebral palsied children. The race of meprobamate: a preliminary evaluation.** J. Pediat., 1958, 53, 467-475. Nine of ten pupils with cerebral palsy in a relatively stable academic environment receiving meprobamate completed the school year with increased attention span, improved ability to learn, and scholastic progress beyond that anticipated from earlier observation. —M. C. Templin.

**454. KOPPITZ, ELIZABETH MUNSTERBERG.** (Children's Mental Health Center, Columbus, Ohio) **The Bender Gestalt Test and learning disturbances in young children.** J. clin. Psychol., 1958, 14, 292-295. A scoring system for the Bender Gestalt Test sensitive to learning problems in young school children was developed on 77 first to fourth graders. Items from Pascal and Suttell's scheme were adapted for this study. Of the 20 scoring categories tested, only seven were found to differentiate significantly between good and poor students including: Distortion of shape, rotation, substitution of circles and dashes for dots, perseveration, failure to integrate parts into wholes, three or more angles in sinusoidal curves, and extra or missing

angles on hexagons. For each S a composite score was computed by adding the number of significant deviations in his protocol. The scoring system was cross-validated on a group of 51 school children. The results indicate that the Bender Gestalt Test can differentiate significantly between above average and below average students in the first four grades of school. —Author's Summary.

**455. LEBO, DELL.** (Richmond Professional Inst., Virginia) **A formula for selecting toys for nondirective play therapy.** *J. genet. Psychol.*, 1958, **92**, 23-34. A formula is presented to enable selecting toys for nondirective play therapy on an objective rather than an inferential basis. The formula is called the "verbal index" and considers both the number and expressive variety of statements made while a particular toy is used. 20 children, ages 4 to 12, were each seen in 3 one-hour individual nondirective play therapy sessions by the same therapist, in the same room, with the same or similar toys. 28 types of play equipment receiving the highest verbal indexes are enumerated, and suggested as the toy nucleus of a nondirective playroom. It is suggested that 11 toys which received very low indexes be avoided, even though some of them have been recommended in published lists. The formula is suggested for determining the verbal expressive value of toys presently in nondirective playrooms, in deciding upon including new toys in the playroom, in selecting specific kinds of toys rather than general types of toys, and in selecting a minimum of the most verbally expressive toys. —J. W. Fleming.

**456. LEVINE, MURRAY, & SPIVACK, GEORGE.** (Devereux Foundation, Devon, Penn.) **Incentive, time conception and self control in a group of emotionally disturbed boys.** *J. clin. Psychol.*, 1959, **15**, 110-113. In a residential treatment setting, adolescent emotionally disturbed boys showed a highly significant drop in conforming behavior as measured by citizenship grades when an immediate incentive was temporarily suspended. This drop occurred despite the fact that a long range incentive to maintain conforming behavior was still in force. Not all of the boys' citizenship grades dropped when the incentive was suspended. When a group who did not maintain grades (NM) was compared with a control group (M) who did, the NM Ss had a more constricted view of time. However, there were no differences between the groups in the ability to voluntarily inhibit a motor habit (slow writing task) nor on a scale purporting to measure internalization of standards of conduct. Our findings are consistent with the concept that emotionally disturbed adolescents as a group are immature and respond to immediate impulses without sufficient regard for more distant consequences and rewards, and also suggest that this deficiency relates quite intimately to the individual's inability to encompass a broad time perspective. —Authors' Summary.

**457. LEVINE, SEYMOUR** (Columbus Psychiatric Inst., Ohio), & **LEWIS, GEORGE W.** **Critical period for effects of infantile experience on maturation of stress response.** *Science*, 1959, **129**, 42-43. Manipulated infant rats respond to cold with depletion of adrenal ascorbic acid (AAA) significantly earlier than non-manipulated infants. The study discussed in this report examined the critical period for infantile manipulation on the depletion of AAA. It was found that infant rats manipulated immediately following birth exhibited significant AAA depletion, whereas infants manipulated later did not exhibit depletion. —Abstract.

**458. LEVITT, EUGENE E.** (Indiana Univer. Med. Center, Indianapolis) **A comparative judgmental study of "defection" from treatment at a child guidance clinic.** *J. clin. Psychol.*, 1958, **14**, 429-432. Child guidance clinics invest considerable time and effort in the total evaluation of their prospective cases. Unfortunately several of these cases do not continue in therapy when this is recommended. This study attempts to answer three basic questions: (a) Are there significant differences regarding motivation for treatment between those who are accepted for treatment, however do not enter treatment, and those who have had at least five therapy sessions? (b) Does the severity of the symptoms differ between these two groups? (c) Can judges adequately distinguished defectors from therapy cases using the molar approach including

diagnostic and identifying data? 50 defector and 50 treatment cases were selected at random from the cases closed out at the Institute for Juvenile Research. These records were submitted to two psychologists and a psychiatric social worker who served as judges. They at first withdrew the cases with which they were familiar and were left with a total of 89 cases (43 in the treated group and 46 in the defector group). The judges were not informed of the proportion of subjects comprising each group. The judges were asked to rate on a 5-point scale the parents' motivation for treatment for their child, the severity of the presenting symptoms in the child, and to sort the complete set of records into one of two categories—those which had come in for treatment and those which were defectors. The reliability of the judgments for the 89 cases utilizing Hoyt's analysis of variance method varied from .69 to .79. There was 100% agreement on the sort for 52 of the 89 records. Analysis of variance was used to test the differences between the treated and defector groups as regards the judgments for motivation and severity of symptoms. The results indicated that the so-called "expert clinician" was unable to differentiate treatment from defector cases with regard to such variables as motivation for treatment and severity of symptoms. They were also unable to predict on the basis of diagnostic and identifying data prospective defector cases. —A. M. Kaplan.

**459. LOWREY, GEORGE H.** (Univer. of Michigan Sch. Med., Ann Arbor) **Obesity in the adolescent.** Amer. J. publ. Hlth, 1958, **48**, 1354-1358. While there may be specific causes such as glandular disturbances in some cases, by far the most common reason in the adolescent is the increased intake of food with an underlying psychological cause. Dietary treatment is important but secondary, with drugs having little place for such patients. Diet need not be severe. Education of the patient and the family is important. —I. Altman.

**460. MORSE, PHILIP W.** (VA Regional Office, Hartford, Conn.) **Psychotherapy with the nonreflective aggressive patient.** Amer. J. Orthopsychiat., 1958, **28**, 352-361. In the two cases presented, significant behavioral changes were produced without the development of insight and without any attempt to develop insight. Identification with the therapist and the introjection of his standards of behavior can be the vehicles of such therapy. In such therapy basic personality changes may occur in superego and ego development. The possibility is raised that in acting-out aggressive characters whose aggression has adaptive value in conforming to the behavior of particular aggressive subcultures, further and ameliorative adaptation to other behavior patterns of the larger culture is possible. It is further suggested that when acting out has such adaptive value it may serve as a criterion for selection for relationship therapy, with the objective of identification with the therapist as a technique leading to greater control of the aggressive behavior. The team provides a flexible pool of therapists, permitting easy transfer from one therapist to another to meet the needs of the individual patient more efficiently. The need to expand the team, bringing in workers of various kinds to better meet the needs of individual patients, is suggested. —Author's Summary.

**461. MYKLEBUST, HELMER R.** (Northwestern Univer., Evanston, Ill.) **The deaf child with other handicaps.** Amer. Ann. Deaf, 1958, **103**, 496-509. The author presents a definition and classification of other handicaps found in deaf children on the basis of urgency as he sees them. A pilot study of 21 children having unusual school learning and adjustment problems in a population of 63 children enrolled in a school for the deaf is reported. Among the important implications of multiple handicapping for programs for deaf children are the needs for specialized programs, the specific consideration of the brain damaged child, psychological and psychiatric services, and further research study with children for whom known methods are unsuccessful in bringing about language acquisition. —M. C. Templin.

**462. NAKAMURA, CHARLES Y.** (Univer. of Calif., Los Angeles) **The relationship between children's expressions of hostility and methods of discipline exercised by dominant overprotective parents.** Child Developm., 1959, **30**, 109-117. This



study applied Miller's conflict and displacement theory to the assessment of relationships between parental discipline techniques and children's expression of hostility. Four hypotheses predicting differences in displacement of hostility expressed by groups of subjects differing in degree of dominant overprotection and severity of discipline exercised by their parents were tested. Displacement of hostility was measured in terms of the subjects' criticisms of people other than their parents. The subjects were 78 college women in an introductory course in personal adjustment. Measures were obtained of parents' method of discipline, parents' overprotective or nonoverprotective techniques of child rearing, children's criticism of parents, and children's criticism of people other than their parents. Scores on these variables were based upon responses to selected questions contained in an autobiographical work book designed for use in college introductory courses in the psychology of adjustment. It was concluded that the significant results obtained for the test of all four hypotheses provided evidence for the usefulness of the conflict and displacement theory in explaining the inhibition of aggressive responses or the direction that they may take. —Author's Abstract.

463. NORMAN, RALPH D., & KLEINFELD, GERALD J. (Univer. of New Mexico, Albuquerque) **Rosenzweig Picture-Frustration Study results with minority group juvenile delinquents.** *J. genet. Psychol.*, 1958, 92, 61-67. Contrast was made on the Rosenzweig Picture-Frustration Study between 20 juvenile delinquents and 44 controls, all Spanish-American males ranging in CA from 15 to 18 years. Correlations were also determined for the degree of relationship between the P-F test and the amount of overt aggression as ascertained from ratings of behavior by a competent judge. Results reveal neither significant differences between delinquents and nondelinquents on the P-F Study, nor significant correlations between rankings of aggressive behavior and the test. However, comparison of the study group with Rosenzweig's normative group revealed considerable difference in P-F Study response patterns. This variation in P-F Study response would seem to be in part culturally determined, and further normative study appears warranted. —From Authors' Summary.

464. ORCHINIK, CARLTON W. **On tickling and stuttering.** *Psychoanal. Psychoanal. Rev.*, 1958, 45, 25-39. . . . The author has compared the tickling experiences of a group of 16 non-stutterers and a group of 14 stutterers and past stutterers, both groups ranging in age from eight to 17 years. In the group of non-stutterers, there were five who stated they were very ticklish; nine, somewhat ticklish; and two, not ticklish. One recalled being tickled hard by his mother, seven remembering being tickled hard by a peer or a younger sibling, and eight had no recollection of ever being tickled hard. In the group of stutterers and former stutterers, 10 said they were very ticklish, and four, somewhat ticklish. 12 recalled having been tickled hard by an adult, usually a parent of the opposite sex. One remembered being tickled hard by a peer, and one was without recollection of ever having been tickled hard. Among this group, it was evident that there had been repeated tickling attacks. These results support the author's clinical observations that stutterers have been subjected to traumatic tickling attacks, often by a parent of the opposite sex. . . . (*Dig. Neurol. Psychiat.*, 26).

465. PAULETT, J. D. (St. Paul's Cray, Kent), & TUCKMAN, E. **Onset enuresis.** *Brit. med. J.*, 1958, 2, 1266-1268. 44 cases of onset enuresis were studied. The precipitating factor in most cases was a maternal pregnancy. A sociological approach was taken in discussing the problem with the mothers. Using untreated cases for comparison, such an approach is shown to be effective in treatment. —Authors' Summary.

466. PETERSON, DONALD R. (Univer. of Illinois, Urbana), BECKER, WESLEY C., HELLMER, LEO A., SHOEMAKER, DONALD J., & QUAY, HERBERT C. **Parental attitudes and child adjustment.** *Child Developm.*, 1959, 30, 119-130. On the basis of interviews with parents of 31 children attending a guidance clinic and 29 children who manifested no obvious maladjustment, ratings pertinent to 7 parent attitude factors were made. Attitudes displayed by the two groups of parents were



then compared, and correlations computed between the measures of parent attitude and indirect but independent evaluations of child problem behavior. The following results emerged: (a) Contrary to general assumption, the attitudes of fathers were at least as intimately related as the attitudes of mothers to the occurrence and form of maladjustive tendencies among children. (b) Both mothers and fathers of children who displayed adjustment difficulties appeared to be less well adjusted and sociable, less democratic, and to experience more disciplinary contention than the parents of children with no manifest problems. Fathers in the former group were more prone to offer suggestions and tended toward extremes of activity and organization. (c) For children attending the clinic, personality problems were relatively independent of maternal attitudes, but were related to autocratic, unconcerned attitudes among fathers. Conduct problems were associated with maternal maladjustment, and with permissiveness and disciplinary ineffectuality among fathers. —Authors' Abstract.

**467. PINNEAU, SAMUEL R., & HOPPER, HAROLD E.** (Univer. of Calif., Berkeley) **The relationship between incidence of specific gastrointestinal reactions of the infant and psychological characteristics of the mother.** *J. genet. Psychol.*, 1958, **93**, 3-13. The hypotheses investigated were that gastrointestinal disturbances of the infant are positively related to the mother's level of anxiety, and to the degree of her emotional disturbance. 38 mothers and their infants were used as subjects. The two reactions used as indices of gastrointestinal disturbance were incidence of regurgitation and frequency of burping. Emotional disturbance in the mothers was measured by the conventional MMPI scales and Winne's Neuroticism Scale. Anxiety was measured by scoring the same protocols for Taylor's Manifest Anxiety Scale, and Welsh's Scale of Judged Anxiety, his "A" factor, and his Anxiety Index. The hypotheses were not supported. The statistically significant relationships were in a direction opposite to that expected. The authors conclude that the results of similar research by other investigators appear to provide no basis for qualifying their results, since statistical measures and tests of significance were lacking in the previous studies. —J. W. Fleming.

**468. RAFFERTY, FRANK T., & STEIN, ELEANOR S.** **A study of the relationship of early menarche to ego development.** *Amer. J. Orthopsychiat.*, 1958, **28**, 170-179. We have presented data from the therapy of two cases of idiopathic precocious puberty and reviewed the literature of a condition that we believe is a natural experiment isolating a biological variable from its usual social matrix. Our conclusions indicate that there should be considerable questioning and reconsideration of the sources of heterosexual behavior. —Authors' Summary.

**469. RICHMOND, JULIUS B., EDDY, EVELYN, & GREEN, MORRIS.** (Syracuse Memorial Hospital, Syracuse, N.Y.) **Rumination: a psychosomatic syndrome of infancy.** *Pediatrics*, 1958, **22**, 49-55. This study of four infants with the syndrome of rumination and their mothers suggests that "the syndrome develops in response to a disordered relationship between parents and baby." —M. C. Templin.

**470. ROSENWALD, ALAN K., HANDLON, JOSEPH H., ROSENTHAL, IRA M., HYDE, JOHN S., & BRONSTEIN, I. PAT.** (Univer. of Illinois Coll. Med., Chicago) **Psychologic studies before and after clitoridectomy in female pseudohermaphroditism caused by congenital virilizing adrenal hyperplasia.** *Pediatrics*, 1958, **21**, 832-839. None of the five female pseudohermaphrodites with congenital adrenal hyperplasia, given a battery of intelligence and personality tests before and some time after clitoridectomy, showed evidence of deleterious psychological effects after the operation. —M. C. Templin.

**471. SUELLWOLD, FRITZ.** (Hochschule fuer Internationale Paedagogische Forschung, Frankfurt/Main) **Empirische Untersuchungen ueber die Sorgen und Probleme von Jugendlichen in Deutschland und den USA.** (Empirical studies concerning problems of adolescents in Germany and the USA.) *Psychol. Rdsch.*, 1959, **10**, 49-66. The need for a standardized method to be used in studying the problems of adolescents in Germany is recognized. The usefulness of an adaptation of the SRA

Youth Inventory, Form S, for present-day youth in Germany is investigated. Development, general structure, standardization and scoring procedure for the original U.S. version as well as for the German adaptation are reported. A comparison is made between a German and an American population sample on variables such as measures of reliability and validity for the different problem areas, rank order of importance of each problem area, and others. Items are considered with respect to frequency of responses in the German and U.S. samples. Most problems of the SRA Youth Inventory are—percentage-wise—chosen equally often by both national groups. However, there are a few items on which there is a difference between the two groups. These are in agreement with differences that are generally assumed to differentiate both cultures: German youth more often consider such statements as these as problems: "I am afraid of failure or humiliation," and "My parents criticize me too much." U.S. youth on the other hand are more often bothered by such problems as: "I want people to like me better," "I want to feel important to society or to my own group," and others. —R. E. Muuss.

472. SYMONDS, PERCIVAL M., & JENSEN, ARTHUR R. **Psychoanalytic concepts and principles discernible in projective personality tests.** *Amer. J. Orthopsychiat.*, 1958, 28, 73-84. There is a strong tendency for fantasy to persist over a 13-year interval. Both in the group as a whole and in individuals fantasy themes tend to maintain the same relative frequency of occurrence. Shifts in fantasy do occur but they tend to be small in amount. In general, changes in fantasy take place as a result of changes in living, such as leaving home for college, work or military service, and in particular, for marriage. Evidence has been presented to indicate that adolescent fantasy which has no counterpart in overt adolescent personality may find expression in later life in overt behavior and attitudes. But, because a given fantasy may have so many possible vicissitudes in actual expression, it is impossible to predict the precise form that its expression will take. —Authors' Summary.

473. THELANDER, H. E., PHELPS, J. K., & WALTON, K. **Learning disabilities associated with lesser brain damage.** *J. Pediat.*, 1958, 53, 405-409. Five cases are presented from an habilitation program for brain damaged children to emphasize that this group deserves the combined efforts of physicians, psychiatrists, educators and others to help attain their optimum development. —M. C. Templin.

474. TISZA, VERONICA B., SILVERSTONE, BETTY, ROSENBLUM, GERSHEN, & HANLON, NANCY. (New England Medical Center, Boston, Mass.) **Psychiatric observations of children with cleft palate.** *Amer. J. Orthopsychiat.*, 1958, 28, 416-423. This paper described some preliminary observations on a group of children born with an oral-facial deformity, and on their mothers. The observations were summed up in detail, but interpretations were avoided because it was realized that the information concerning the child's development and our insight into the parent-child relationship were extremely limited. At best, we got a glimpse into the mother's relationship to the child's deformity. A research Developmental Clinic has been established at the Cleft Palate Institute for the longitudinal study of the mother-child unit from the newborn period on. In addition, several of the children who were seen for diagnostic evaluation have started psychiatric treatment within the framework of our project. —Authors' Summary.

475. TRENT, RICHARD D. (Puerto Rico Inst. of Psychiatry, Bayamon) **The expressed values of institutionalized delinquent boys.** *J. gen. Psychol.*, 1958, 92, 133-148. The purpose of this study was to explore and compare the expressed family, peer, and self values of three ethnic groups of institutionalized delinquents. The subjects were 20 Negro, 20 white, and 20 Puerto Rican boys, matched on several variables. The term values was defined as those qualities and achievements which were expressed by the subjects in a structured interview situation. The major findings were that there were no significant differences between ethnic groups in expressed family, peer, or self values, nor differences in value conflict scores. Self and family values seemed primarily to be strongly materialistically and gratification-oriented. The most frequently mentioned peer value involved outer-directed character traits, such as

helping others. The largest self-family conflict scores were attributable to a high appraisal of material possessions and comparatively low appraisal of being a good family member. The largest family-peer value conflict scores were attributed to the peer group's high rating for outer-directed character traits as opposed to the families comparatively low ratings for this trait. Inner-directed character traits, and education and intelligence, were infrequently mentioned as self, peer, and family values. Among the conclusions were that the subjects need help in discovering personal values which are meaningful to themselves, and in gaining an appreciation and acceptance of non-materialistic, moral, and spiritual values. —From Author's Summary.

476. TYERMAN, M. J. (Grimsby Education Committee) **A research into truancy.** Brit. J. educ. Psychol., 1958, 28, 217-225. A study utilizing tests, school records, and interviews of 137 truants charged at Court, and a comparison between 40 representative truants and a group of nontruant children, revealed that adverse home circumstances and a lack of satisfaction in home or school are probably the most important conditions of truancy. —From Author's Summary.

477. WATSON, E. JANE, & JOHNSON, ADELAIDE M. (Mayo Clinic, Rochester, Minn.) **The emotional significance of acquired physical disfigurement in children.** Amer. J. Orthopsychiat., 1958, 28, 85-97. The authors studied by psychiatric interviews five children who were subjected to an accident or other experiences resulting in alteration of their bodies. They corroborated the findings of McGregor "that the child perceives and imitates parental attitudes toward his body and its parts, and that the child perceives and imitates the defenses against anxiety utilized by the parents." The authors describe the child's concept of self as a unique product of his experiences, both sensorimotor and effective. When a discrepancy occurs between the image of the body and the reality of the altered body image, there is a revision of the body image. Denial of the alteration leads to anxiety. Defenses against this could be projections of the defect by revengeful wishes against others. Psychotherapy can be of help, especially if instituted in the hospital with the cooperation of the surgeon. —I. A. Kraft.

478. WENAR, CHARLES. (Univer. of Pennsylvania, Philadelphia) **The degree of psychological disturbance in handicapped youth.** Except. Child., 1958, 25, 7. The hypothesis tested was that there is no significant difference in the depth of psychological disturbance between handicapped and nonhandicapped adolescents needing professional help. The subjects were 30 handicapped youths, ages 14 to 22, and 20 nonhandicapped youths, ages 14 to 23. Males, females, whites, and Negroes were included in both groups. Rorschach data were treated statistically in terms of a sign approach and evaluatively by means of a rating scale. The results suggested that the handicapped youths tend to be somewhat healthier, have more vitality, inner resources, and creativity, but are more sensitized to potential dangers in their environment. It was concluded that physical handicap cannot be equated with psychological disturbance. —J. W. Fleming.

479. WINDER, C. L., & KANTOR, ROBERT E. **Rorschach maturity scores of the mothers of schizophrenics.** J. consult. Psychol., 1958, 22, 438-440. This study reports that mothers of schizophrenic sons manifested more pathology than mothers of normal sons on the Rorschach. The "schizophrenogenic" parents showed less "maturity of personality development" as shown by an over-all rating of the Rorschach protocol on a 5-point scale. —E. E. Levitt.

480. WOODWARD, KATHERINE F., SIEGEL, MIRIAM, & EUSTIS, MARJORIE J. (Lenox Hill Hospital, New York City) **Psychiatric study of mentally retarded children of preschool age: Report on first and second years of a three-year project.** Amer. J. Orthopsychiat., 1958, 28, 376-393. This is a report on the first and second years of a three-year project for the study and treatment of a group of nine mentally retarded preschool children. It represents the combined efforts of a clinic team of psychiatrist, pediatrician, psychologists, psychiatric caseworkers and nursery school teachers. The aim of this project is to determine whether psychogenic

factors are responsible for the retardation, and whether these children can be helped toward an improved functioning. It appears that psychogenic factors underlie the mental retardation in sufficient intensity to instigate the inhibition in mental growth. All but one of the children with regular attendance revealed changes of a positive nature reflected in the attainment of more appropriate skills. Those children in whom psychotic features were less marked showed a more favorable response to the total program. The work with the parents proved to be of major significance in the study and treatment of these children. Because of their developing language usage, future therapeutic sessions may lead to a more dynamic understanding of the psychogenic factors that underlie the intellectual retardation. —From Author's Summary.

**481. ZUCKERMAN, MARVIN, & OLTEAN, MARY.** (Indiana Univer. Med. Center, Indianapolis) **Some relationships between maternal attitude factors and authoritarianism, personality needs, psychopathology, and self-acceptance.** *Child Developm.*, 1959, **30**, 27-36. The purpose of this study was to evaluate the construct validity of three factors previously extracted from the Parental Attitude Research Instrument by correlating them with other attitude and personality measures. Three groups of subjects were used: 60 female psychiatric patients, 24 mothers of college students, and 88 unmarried student nurses. The tests used were the California F scale, the Edwards Personal Preference Schedule, the MMPI, and a test of Self-Acceptance. The Authoritarian-Control factor correlated positively with authoritarian attitudes (F scale) in nurses and patients, negatively with Affiliation need (EPPS) in mothers and positively with Deference in nurses. In the patient group this factor correlated negatively with education and positively with Masculinity (MMPI-Mf). The Hostility-Rejection factor correlated: positively with Achievement and Aggression in mothers, and negatively with Nurture and Affiliation; negatively with Self-Acceptance in nurses; positively with six clinical scales on the MMPI in patients and negatively with the K scale. The Democratic Attitudes factor correlated positively with Nurture and negatively with Deference in the nurses. The results were interpreted as offering some evidence for construct validity of the PARI factors although more so in married women than in unmarried girls. —Authors' Abstract.

#### PUBLIC HEALTH AND HYGIENE

**482. CURRAN, FERN HOLDERFELD.** (City Health Dept., Dallas, Texas) **A survey of the municipal supervision of child care facilities.** *Amer. J. publ. Hlth*, 1958, **48**, 1602-1606. Because of the large numbers of working mothers today, day care centers and similar facilities for taking care of their children have been established in many cities. A questionnaire concerning policies governing such facilities was sent to 22 large cities. One-third stated that they had personnel specialized in the inspection and supervision of these places, and over half stated they utilized nonspecialized personnel (11% did not reply to this question). Nurses were found to be active in the inspection of day care centers, nursing schools, and foster homes in half of the cities. —I. Altman.

**483. EDWARDS, J. H.** (Univer. of Birmingham) **Congenital malformations of the central nervous system in Scotland.** *Brit. J. prev. soc. Med.*, 1958, **12**, 115-130. An epidemiologic study of anencephalus, spina bifida, and hydrocephalus was conducted on the basis of data derived from the reports of Registrar General for Scotland, 1939 to 1956. Marked statistical association of all three malformations with social class and increasing maternal age was found. Variations related to geographic region and to annual incidences were noted. Spina bifida was consistently influenced by urbanity and anencephalus showed marked seasonal variation. Since no "clumping" of cases was apparent, it was concluded that epidemic disorders did not constitute a major cause of the malformations. —W. W. Sutow.

**484. EMERY, MARGARET.** (Children's Bureau, Washington, D.C.) **Provisions for the protection of children in Sweden.** *Soc. Sec. Bull.*, 1958, **21**(9), 12-15, 20.

Central authority for the administration of social legislation for the protection of children is the Royal Social Welfare Board. County boards represent the Royal Board in each of the 26 counties, with county councils administering facilities which serve an entire county. Local child welfare committees carry the basic, mandatory responsibility for the protection of children. Government funds to help finance day care are available to local districts, foundations, voluntary associations, and industrial concerns. Each county is required by law to have a comprehensive plan for the institutional care of normal children, including homes for infants less than a year old, maternity homes, reception homes for children 1 to 16, and homes for permanent care for children aged 1 to 16 who cannot or should not be placed in a private family. The local child welfare committees have responsibility for the care of delinquent youth, through the provision of leisure-time facilities and activities and similar preventive measures. Government subsidies have been used to set up child guidance clinics. The Child Welfare Bureau in the Royal Board and the local child welfare committees participate in providing recreation for mothers and children, including summer camps and holiday travel. In 1956, almost 19,000 children were placed with private families for vacations. There are special camps for deaf, spastic, and asthmatic children. —I. Altman.

**485. FLOWERS, CHARLES E., Jr.** (Univer. North Carolina School of Med., Chapel Hill), **WEINEL, WILLIAM H., & KIRKLAND, JOHN A.** **Perinatal mortality in the North Carolina Memorial Hospital, 1952-1958.** J. Amer. med. Ass., 1959, **169**, 1037-1042. A series of 2728 deliveries in a university hospital were examined. There were 133 perinatal deaths (from birth through the 28th day), each of which was studied by review of the mother's and infant's charts and of autopsy records. Among infants weighing 1000 gm. or more, the rate was reduced from 38.67 to 23.39 deaths per 1000 births during the study period; this is partly explained by a progressive decrease in the proportion of indigent patients, for a significant correlation was found with socioeconomic status. The principal causes of death were hemorrhagic complications, toxemia of pregnancy, congenital malformations, and premature rupture of membranes. "The principal errors in obstetrical practice were related to the management of fetal distress, toxemia of pregnancy, and diabetes. A reduction in perinatal mortality can occur with improved obstetric care. This reduction will be most significant when it is associated with an improvement in the socioeconomic status of the obstetric patients and a reduction of the birth rate among indigent mothers." —I. Altman.

**486. GEHAN, EDMUND A.** (Univer. of North Carolina, Chapel Hill) **Sampling and screening problems in a rheumatic heart disease case-finding study.** Amer. J. publ. Hlth, 1958, **48**, 1335-1341. Case-finding studies are difficult in diseases such as rheumatic heart disease where accurate diagnostic tests are lacking and where incidence is small. Statistical methods for such a situation were applied in a case-finding study among with grade children in three North Carolina counties. Purpose was to find as many cases as possible and also to estimate the proportions of false-negatives in the nonsuspect groups. A screening examination was conducted to separate the population into groups with varying degrees of suspicion of having the disease. Methods are given for allocating a given sample size, with cost fixed, to the groups formed by dividing the children according to degree of suspicion of having the disease. In the study, the estimated prevalence rate was 8.2 per 1000 for children with probable rheumatic heart disease and 6.8 per 1000 for children with definite rheumatic heart disease. Changes in the screening examination are suggested which will lead to an over-all increase in the efficiency of such a study. —I. Altman.

**487. HEIN, FRED V.** (Amer. Med. Ass., Chicago, Ill.) **Education aspects of athletics for children.** J. Amer. med. Ass., 1958, **168**, 1434-1438. The ideal program provides an opportunity for every boy and girl to participate in a wide range of activities. Medical supervision is necessary to make certain that the program is conducive to the health and safety of each participant. Community education is important—to build public understanding of the real purposes and values of athletics in education. —I. Altman.



**488. HOXIE, JEAN.** (Hamtramck Public Schools, Mich.) **Competitive athletics for children.** J. Amer. med. Ass., 1958, **168**, 1439-1440. A successful sports program includes competition but the child must learn to take losses as well as victories. However, the child should not be put in a situation where defeat is inevitable. Competitive athletics, properly directed, should be a positive force for growth and personality development. —I. Altman.

**489. KNOBLOCH, HILDA** (Ohio State Univer. Coll. Med., Columbus), & **PASAMANICK, BENJAMIN.** **Seasonal variation in the births of the mentally deficient.** Amer. J. publ. Hlth, 1958, **48**, 1201-1208. In studying the admissions of mentally defective children, born in the years 1913-1948, to the Columbus State School, it was found that significantly more had been born in the winter months, January, February, and March. Since the third month after conception is known to be the period during pregnancy when the cerebral cortex of the unborn child is becoming organized, any damage which occurred at that time could affect intellectual functioning. The months when this might happen would be June, July, and August, the hot summer months, when pregnant women might decrease their food intake, particularly protein, to dangerously low levels and consequently damage their developing babies. If this were so, one would expect that hotter summers would result in significantly more mental defectives born than following cooler summers. This was exactly what was found to a highly significant degree. Possible explanations of the above findings were sought in the occurrence of summer encephalitis and an increased birth rate in the lower socioeconomic group, but these were not confirmed. . . . Inadequate dietary intake during pregnancy, because of heat as well as substandard economic conditions, may be an important link in the vicious cycle that results in poor physical and mental growth. —From Authors' Summary.

**490. KNOX, G.** (Univer. of Birmingham), & **MACKINTOSH, J.** **Postnatal infant mortality in Birmingham between 1947 and 1956.** Brit. J. prev. soc. Med., 1958, **12**, 131-134. The birth rank/maternal age distribution of postneonatal infant mortality rates in Birmingham in 1947 is shown to have persisted over the following 10 years despite a large over-all reduction and a small degree of narrowing of the differentials. Although these differentials were as consistent for noninfective as for infective deaths, the reduction of mortality over these 10 years has been due entirely to a reduction in the latter group. It is concluded that the recent period of rapidly declining mortality was due mainly to therapeutic advances in the field of infective disease and that this period is now ending. —Authors' Summary.

**491. MCCAMMON, ROBERT W.** (Child Res. Council, Univer. of Colorado, Denver), & **SEXTON, ALAN W.** **Implications of longitudinal research in fitness programs.** J. Amer. med. Ass., 1958, **168**, 1440-1445. The Child Research Council has made repeated examinations of the same group of individuals. For this study, the children were divided into three groups: (a) participants in team sports; (b) persons individually active in sports; (c) and nonathletes. From each group, one boy was selected for whom the longest and most nearly complete follow-up records were on hand. Four tests were performed periodically consisting of 4 minutes of exercise on the bicycle ergometer. All three showed consistently similar scores. It is concluded that "children and young adults who show no frank disease are generally and similarly fit. The response to conditioning programs, such as athletic participation, is a highly individual thing rather than a group or age phenomenon, so that the expectation is unrealistic that any conditioning program applied to a general population of any age level will produce uniform response." —I. Altman.

**492. MAKSIM, GEORGE.** (1418 Good Hope Rd., S.E., Washington, D.C.) **Desirable athletics for children.** J. Amer. med. Ass., 1958, **168**, 1431-1433. Five principles of a desirable program are set forth: (a) acceptance by the community; (b) recognized health aspects; (c) an informed, emotionally stable group of adults behind every program; (d) provision for all levels of learners; (e) primary goal the total well-being of the child. The program should not include contact sports. —I. Altman.



493. MELLANBY, M. (London Sch. Hygiene & Tropical Medicine), MARTIN, W. J., & BARNES, D. **Teeth of 5-year-old London school children (1957) with a comparison of the results obtained from 1929 to 1957.** *Brit. med. J.*, 1958, 2, 1441-1443. The 1957 biannual detailed survey of deciduous teeth in 1241 children who passed their fifth, but not their sixth birthdays, showed little or no change in the caries picture since 1955. The marked improvement in caries status that occurred between 1929 and 1947 has been attributed to more scientifically controlled nutrition of pregnant women and babies. The deterioration between 1947 and 1955 has been blamed on the increased consumption of "lollies" and candy. —W. W. Sutow.
494. MORTON, WILLIAM (Colorado State Health Dept., Denver), HOFFMAN, MURRAY S., CLEERE, ROY L., & DODGE, HORACE J. **Comparison of three methods of screening for pediatric heart disease.** *J. Amer. med. Ass.*, 1959, 169, 1169-1172. A total of 5654 grade school children in two Colorado communities were examined by three screening methods: single-lead electrocardiogram, miniature chest x-ray, and limited physical examination. An efficiency index was calculated by multiplying the specificity quotient (ratio of true positive tests to total positive tests) by the sensitivity quotient (ratio of true positive tests to the total number of patients having the condition for which the test is made). The physical examination gave the highest efficiency index, .272; the ECG,  $V_3R$  lead, index was .149, and the chest x-ray only .096. The combination of all three screening methods used simultaneously was more sensitive but less specific than the physical examination used alone; however, three methods used together are time-consuming and expensive. "No screening method is infallible . . . if the studies were performed on large enough groups of children (over 5000), the prevalence rates offered probably erred on the low side of the true prevalence rates." —I. Altman.
495. NEILSON, ELIZABETH A., & IRWIN, LESLIE W. **Analytical study of school health service practices in the United States.** *Res. Quart. Amer. Ass. hlth phys. Educ., & Rec.*, 1958, 29, 417-458. On the basis of professional criticisms of 15 experts from medicine, health education, and public health, an inquiry form pertaining to school health practices was developed. This form contained 61 categories with 620 options. The survey was conducted in three separate census groupings in the United States, using random sampling techniques where necessary; replies from a total of 250 cities were received. Several of the important conclusions reached in this study follow. Listed as common weaknesses were: lack of co-ordination between school health services, physical education, and health instruction; lack of full-time and part-time personnel to carry out the health service program; insufficient community aid for those children who cannot afford to pay for remedial services; insufficient consultations and conferences between teachers, nurses, and parents in the health interests of individual children; inadequate provision for special education of all types. Of the three population groups represented, large metropolitan communities offered more services than either of the other two groups. In general, health service programs under the control of the board of education included more of the options appearing on the inquiry form than do those of the two other administrative plans (Board of Health, and Board of Health and Board of Education jointly). —H. H. Clarke.
496. PALMER, W. T. (Public Health Dept., London Co. Council), & PIRRIE, D. **Survey of pupils in schools for physically handicapped in London.** *Brit. med. J.*, 1958, 2, 1326-1328. A survey was made in 1957 of the reasons given for admission of the 1325 children in London's schools for the physically handicapped. The diagnoses were coded under the International Statistical Classification (W.H.O., 1957). 93 different conditions were recorded. The most common reason for admission was cerebral palsy (312), followed by poliomyelitis (240) and congenital heart disease (127). —From Authors' Summary.
497. ROSENFELD, A. B. (Minn. Dept. of Health, Minneapolis) **Children with rheumatic fever in Minnesota.** *Amer. J. publ. Hlth*, 1958, 48, 1596-1601. Some 50.8% of the members of the Minnesota State Medical Association (1519 replies)

reported that they had treated 2297 cases of rheumatic fever in 1955. This was in contrast to an average of 187 cases reported annually to the State health department. Follow-up of the cases showed that 1650 of the 2297 cases were "acceptable" as rheumatic fever. Follow-up of the nonreporting physicians showed that there were over 2600 cases treated in 1955, with two-thirds occurring in children under 15 years. "This study, then, clearly reveals that rheumatic fever continues to be a prevalent disease and constitutes a serious problem in Minnesota, especially in children. This means that physicians as well as the public must be made aware of the necessity of early diagnosis and treatment and of the importance of long-term prophylaxis." —I. Altman.

**498. WELLS, HENRY B.** (Univer. of North Carolina, Chapel Hill), **GREENBERG, BERNARD G., & DONNELLY, JAMES F.** *North Carolina fetal and neonatal death study. I. Study design and some preliminary results.* Amer. J. publ. Hlth, 1958, **48**, 1583-1595. Purpose of the present study, conducted in three teaching hospitals in North Carolina, was to determine feasibility of the study design and to improve the schedule being used. An 8-page schedule was completed for each fetal death in which the fetus weighed 400 gm. or more and for every neonatal death. A schedule was also completed for each infant in a comparison group surviving at least 27 days. Preliminary results were analyzed and tested by contingency chi square and analysis of covariance. Some of the significant factors in death, after adjustment for several covariables, were: lower educational levels of mothers, older and younger mothers, long and short birth intervals, and length of gestation. Factors which were not significant were: mother's diet score, parity, height of mother, and prenatal care. "The experience in this study suggests that in similar studies more use be made of medical social workers and nutritionists and that the dissimilarities between perinatal deaths among premature infants and premature survivors be studied more intensively." —I. Altman.

#### HUMAN BIOLOGY AND DEMOGRAPHY

**499. AKSOY, M.** (Beyoglu Ilk Yardim Hastanesi, Beyoglu, Istanbul), **IKIN, E. W., MOURANT, A. E., & LEHMANN, H.** *Blood groups, haemoglobins and thalassaemia in Turks in Southern Turkey and Eti-Turks.* Brit. med. J., 1958, **2**, 937-939. The ABO, MNS, rh, Lutheran, Kell and Duffy blood-group frequencies of the Turks and Eti-Turks of the Mersin area do not differ greatly from the values commonly found in Europe. Thalassaemia is present in both populations and sickling in the Eti-Turks, in whom its propagation may have been favoured by the prevalence of malaria. Haemoglobin E occurs sporadically amongst the Eti-Turks, and haemoglobin D was found once amongst 240 Turks. —Authors' Summary.

**500. BENNETT, CHARLES G., & LOUIS, LILIAN S. K.** *Demographic factors influencing birth weight.* Hawaii med. J., 1959, **18**, 239-244. This report is based on the records of 31,122 single births in Hawaii during the year 1952-1953. It is especially concerned with the premature births which comprised 7.2% of all births. Prematurity was determined by birth weight. No significant differences in per cent of prematurity was found between urban and rural births and among broad socioeconomic classes. The most marked differences were between births of different racial antecedents. Premature births comprised 5.3% among Koreans, 6.3% for Caucasians, 6.4% for Chinese, 6.7% for part Hawaiian and for Japanese, 10.2% for Puerto Ricans, and 11.6% for Filipinos. Data are also given as to the extent of prematurity on each island by birth order, extent of maternal care, and illegitimacy. —M. E. Smith.

**501. BULMER, M. G.** (Univer. of Manchester) *The repeat frequency of twinning.* Ann. Hum. Genet., 1958, **23**, 31-35. The frequency of twins among the sibs of twins was studied in 920 twin pairs. Without making an assumption about the heredi-

tary or environmental source of the variability, it is concluded that there is little or no variability between mothers in the monovular twinning rate and considerable variability in the binovular twinning rate. No effect of maternal age on repeat twinning was found in the data analyzed here. —S. G. Vandenberg.

**502 BULMER, M. G.** (Univer. of Manchester) **Twinning rate in Europe during the war.** *Brit. med. J.*, 1959, **1**, 29-30. The dizygotic twinning rate fell during the war in France, Holland, and Norway, but not in Denmark, Sweden or the northwest of France; the monozygotic twinning rate remained constant in all these countries. It is suggested that this was due to a decreased tendency of the ovary to produce double ovulations, which was caused by undernutrition. —Author's Summary.

**503. FARQUHAR, J. W.** (Univer. of Edinburgh), **MacGREGOR, A. R., & RICHMOND, J.** **Familial haemophagocytic reticulosis.** *Brit. med. J.*, 1958, **2**, 1561-1564. The clinical and pathological features of a further case of familial haemophagocytic reticulosis have been described, and an account has been given of investigations into the aetiology. The possible mode of inheritance is briefly discussed. —Authors' Summary.

**504. GORHAM, G. W.** (Johns Hopkins Hospital), & **MERSELIS, J. G., Jr.** **Kartagener's triad: a family study.** *Bull. Johns Hopkins Hosp.*, 1959, **104**, 11-16. Two cases of Kartagener's triad occurring among siblings are presented with a detailed study concerning the familial incidence of this syndrome. Its rarity among Negroes is noted. It is suggested that an environmental rather than a genetic factor may account for the appearance of the syndrome. —Authors' Summary.

**505. HIGGINS, CONWELL, & SIVERS, CATHRYNE H.** **A comparison of Stanford-Binet and Colored Raven Progressive Matrices IQs for children.** *J. consult. Psychol.*, 1958, **22**, 465-468. The Stanford-Binet and the Colored Raven Progressive Matrices were administered to 349 Negro children and 440 white children between the ages of 7 and 10 years. The children were pupils at public schools in the lowest socioeconomic area of a northeastern city. No differences were found for either sex or color on the Binet. There was a slight tendency for scores to decrease with age for all groups. The white children scored significantly higher (over 10 points) than the Negro children on the CRPM. This difference was consistent for all age-sex subgroupings except one. There were no sex differences apart from color. There was also a tendency for scores to decline with age. The authors suggest that "the CRPM can not be considered a test of intelligence . . . but is rather a measure of a specific skill." —E. E. Levitt.

**506. HOROWITZ, SIDNEY L.** (Columbia Univer., New York City), **OSBORNE, RICHARD H., & DeGEORGE, FRANCES V.** **Caries experience in twins.** *Science*, 1958, **128**, 300-301. A comparison of monozygotic and dizygotic twin pairs, ranging in age from 18 to 55 years when examined, indicated a "measurable genetic component of susceptibility to dental caries."

**507. LANE, W. KENNETH.** (Natl. Foundation, New York City) **Role of pediatrician in physical fitness of youth.** *J. Amer. med. Ass.*, 1959, **169**, 421-427. A comparison of American with European school children as to physical fitness was made in 1953 by applying the six basic Kraus-Weber tests to 4458 children in this country and about 3000 children in Italy and Austria. These tests evaluate the strength of the psoas, the lower abdominal muscles, and the lower and upper back muscles, as well as flexibility of the back. The results showed the physical inferiority of American children in physical performance, and subsequent findings indicate that the fitness level of the general public has been falling steadily even while the performance of selected star athletes has improved. The tendency has been for the number of active participants in athletics to decrease while the number of people watching by television and applauding comfortably from armchairs has increased. The pediatrician can do much to remedy this, for he is the family's best friend. He should help the child realize early in life that a flexible, strong body is vitally important. —Journal Summary.

**508. PALERMO, DAVID S.** (Univer. of Minnesota, Minneapolis) **Racial comparisons and additional normative data on the children's manifest anxiety scale.** *Child Developm.*, 1959, **30**, 53-57. The study reports some descriptive statistics obtained with the children's manifest anxiety scale for a population of 530 Negro and white fourth, fifth, and sixth grade children. The mean scores for the white Ss were found to be lower on the A-scale and higher on the L-scale when compared with the group originally tested. One month retest reliabilities were only slightly lower than those obtained with a one-week interval in the group originally tested. The Negro group was found to score significantly higher than the white group on both parts of the test. —Author's Abstract.

**509. PARKER, NEVILLE.** (Brisbane Psychiatric Clinic, Australia) **Congenital deafness due to a sex-linked recessive gene.** *Amer. J. hum. Genet.*, 1958, **10**, 196-200. A family is described in which 15 members are deaf. Of these 14 are males. The analysis of the pedigree which involves 5 generations leads the author to the conclusion that this is due to a sex-linked recessive gene. —S. G. Vandenberg.

**510. PAULING, LINUS.** (Calif. Inst. Technology, Pasadena) **Genetic and somatic effects of carbon-14.** *Science*, 1958, **128**, 1183-1186. On the basis of information about carbon-14 given by Libby, calculations are made of the predicted genetic and somatic effects of the carbon-14 produced by the testing of nuclear weapons. It is concluded that 1 year of testing (30 megatons of fission plus fusion) is expected to cause in the world (estimated future number of births per year 5 times the present number) an estimated total of about 55,000 children with gross physical or mental defects, 170,000 stillbirths and childhood deaths, and 425,000 embryonic and neonatal deaths. (There is an unknown amount of overlap of these three categories.) These numbers are about 17 times the numbers usually estimated as the probable effects of the fallout fission products from 1 year of testing. In addition, the somatic effects of bomb-test carbon-14 are expected to be about equal to those of fission products, including strontium-90, with respect to leukemia and bone cancer and greater than those of fission products with respect to diseases resulting from radiation damage to tissues other than bone tissue and bone marrow. All of the estimated numbers are subject to great uncertainty; they may be as much as 5 times too high or 5 times too low. The uncertainty in the estimation of the relative effects of carbon-14 and fission products in world-wide fallout is not so great. —Author's Summary.

**511. PENROSE, L. S.** (Galton Laboratory) **Mechanics of self-reproduction.** *Ann. Hum. Genet.*, 1958, **23**, 59-72. Several types of artificial objects are sketched, which are capable of self-reproduction in the sense defined by Turing and elaborated by von Neumann. This paper discusses essential features of such machines and relates these features to some of the theories about the behavior of the basic genetic material DNA. —S. G. Vandenberg.

**512. PIERON, H.** (Collège de France) **Les différences individuelles et les conceptions génétiques en matière d'intelligence.** (Individual differences and conception of the genetics of intelligence.) *BINOP*, 1958, **14**, 71-81. A discussion of the studies of Thomson, Burt and Blewett leads the author to suggest that perhaps the primary factors in intelligence are more closely related to genes than global intelligence. —S. G. Vandenberg.

**513. POST, RICHARD H.** **Bibliography of human genetics.** *Amer. J. hum. Genet.*, 1958, **10**, 482-493. This is the very useful continuation of the quarterly list of references in human genetics, selected from the Current List of Medical Literature, formerly prepared by Rae Phelps Merick. —S. G. Vandenberg.

**514. STIRLING, G. A.** (Univer. Coll., West Indies, Jamaica), & **KEATING, V. J.** **Size of the adrenals in Jamaicans.** *Brit. med. J.*, 1958, **2**, 1016-1018. The adrenal glands in Jamaicans are smaller than in Europeans. This reduction in size is probably due to a reduced cortical mass. It is suggested that this reduced cortical mass is concerned in the poor response to shock reported in Jamaicans and others

of African descent. It may also play some part in the different pattern of disease encountered in Jamaica. —Authors' Summary.

## EDUCATION

**515. BACHER, F.** (Centre National de la Recherche Scientifique) *Étude sur la structure de l'information apportée par l'examen d'orientation professionnelle.* (Study of the information structure of the vocational guidance examination.) *BINOP*, 1957, 13, 108 p. (Special No.) The relationship between 70 variables drawn from a medical examination, individual and group tests, a teacher questionnaire and an interview with the child and his parents are presented for 132 boys and 123 girls between 12 and 17 years old. Three main clusters of variables related to school achievement, physical condition, and test performance were found, as well as three minor clusters for family circumstances, interests, and ratings based on the interview with the child. —S. G. Vandenberg.

**516. BANHAM, KATHARINE M.** *Maturity level for reading readiness—a check list for the use of teachers and parents as a supplement to reading readiness tests.* *Educ. psychol. Measmt*, 1958, 18, 371-376. A check list to measure children's readiness to learn reading is presented as well as preliminary validation studies. —S. G. Vandenberg.

**517. FRIEDMANN, S.** (Oxford, England) *A report on progress in an L.E.A. remedial reading class.* *Brit. J. educ. Psychol.*, 1958, 28, 258-261. Comparisons were made between the progress in reading of 13 retarded children before entering a remedial class, and after a period of instruction in the class. The difference was found significant at the .01 level when a *t* test of significance of difference between means was made. The retests of a comparable group of retarded pupils not receiving remedial instruction showed no difference in their progress rate between the periods from first to second, and second to third retests. —From Author's Summary.

**518. KOCH, FREMONT P.** (Los Angeles Children's Hospital, Calif.) *A nursery school for children with cerebral palsy: five-year follow-up study of thirteen children.* *Pediatrics*, 1958, 22, 401-408. 13 children with cerebral palsy attending a special nursery school between 18 months and three years were followed five years later to check on the original diagnosis and prognosis; to gain information on problems of children, criteria of selection for attendance, the conduct of the nursery school; and to obtain parents' evaluation of their child's nursery school experience. —M. C. Templin.

**519. KOLSTOE, OLIVER P.** (Southern Illinois Univer., Carbondale) *Language training of low-grade Mongoloid children.* *Amer. J. ment. Def.*, 1958, 63, 17-30. The purpose of the study was to determine whether very retarded Mongoloid children could be trained in language functions when given intensive individual training. 30 subjects were matched on the basis of MA and randomly assigned to experimental and control groups. The range in age was from about 6 to 14, in MA from 1-6 to 3-9, and in IQ from 16 to 36 (Kuhlmann Tests of Mental Development). The measuring instruments were The Illinois Language Test, an observational rating scale, and a composite scale of items from the Kuhlmann and Binet and a candy game test. Children were taught individually in 45 minute periods, 5 days a week for 5½ months. Extensive materials and techniques were flexibly employed. There was a small mean decrease in IQ score for both groups. On tests involving labeling objects and pictures, word association, and gestural conversation the experimental group showed statistically significant improvement over the control group. These changes, as well as others, tended to be characteristic of children with higher MAs. —J. W. Fleming.

**520. LAUGIER, H., & SCHREIDER, E.** *Recherche docimologique sur un examen de l'enseignement supérieur.* (Analytic study of a University examination.)

Biotypologie, 1958, 19, 61-72. Grades assigned by four examiners each judging a different part of the written examination all have markedly skewed distributions, with generally few high marks. The grades intercorrelated poorly, especially for the candidates passed. The authors draw attention to the remarkable lack of objectivity of such methods. —S. G. Vandenberg.

**521. REUHLIN, M.** (Institut National d'Orientation Professionnelle) **Une conférence internationale sur l'orientation des élèves vers les différentes sections de l'enseignement du second degré.** (An international conference on the guidance of students into the various programs in intermediate education.) *BINOP*, 1958, 14, 308-325. A conference was held at Sigtuna, near Stockholm, directed by M. T. Husen and M. S. Henrysson and attended by representatives from Austria, Belgium, Denmark, France, Germany, Great Britain, Greece, Holland, Ireland, Iceland, Italy, Luxemburg, Norway, Spain, Sweden and Turkey. The conference dealt with problems arising from the selection or guidance of high school age students into the various types of high schools and curricula offered in Europe. Papers were presented on the unified high school plan of Sweden (by J. Orring, by G. Helen and by M. K. Harnqvist) as well as on the advantages of schools with different curricula (by M. J. Sandven, by A. Boutet de Monvel and by C. H. Dobinson). A second series of papers described vocational guidance practices in most of the countries represented at the Conference. —S. G. Vandenberg.

**522. SHOUKSMITH, G.** (Univer. of Edinburgh) **Fluency and essay writing.** *Brit. J. educ. Psychol.*, 1958, 28, 266-270. In order to investigate fluency in essay writing, 66 children from Edinburgh's primary schools who were in their final year were given an essay to write and a number of fluency tests. The correlation matrix resulting from these measures was used in a factorial analysis by Thurstone's centroid method in order to provide a simple qualitative model of what was involved in fluency writing. It was concluded that a minor ideational factor did seem to enter into essay writing, together with verbal ability. General fluency did not appear to enter into essay writing. —W. D. Smith.

**523. STRENG, ALICE.** **On improving the teaching of language.** *Amer. Ann. Deaf*, 1958, 103, 553-563. The author discusses possible improvements in teaching language to deaf children that could be obtained through knowledge of the contributions of linguistics in teaching foreign language and psychological learning theory. —M. C. Templin.

## SOCIOLOGY

**524. ANTONOVSKY, HELEN FAIGIN.** (Bank Street Coll. Educ., New York City) **A contribution to research in the area of the mother-child relationship.** *Child Developm.*, 1959, 30, 37-51. The study reported here was an exploratory investigation in which two sets of hypotheses were tested. One set of hypotheses was concerned with the relationship between mother behavior and child behavior, the other, with the relationship among three sets of data on mother behavior obtained by use of different methods of data collection. The sample consisted of nine mothers and nine children aged 20 to 23 months of age. . . . —From Author's Summary and Conclusions.

**525. BARTLETT, CLAUDE J., & HORROCKS, JOHN E.** (Ohio State Univer., Columbus) **A study of the needs status of adolescents from broken homes.** *J. genet. Psychol.*, 1958, 93, 153-159. The purpose of this study was to determine how the needs status of adolescents from homes where one parent is deceased differs from those of adolescents from homes where both parents are living. The subjects, 461 children, were drawn from a population consisting of all children in the 8th through the 12th grades in an Ohio city of 10,000 persons. Needs status was determined by



the Experimental Form of the Horrocks-Lucas Needs Questionnaire. The data were factor analyzed and seven factors extracted. The loading on the criterion, number of parents deceased, was significant for only three factors: Heterosexual Striving versus Satisfaction from Parents, Socioeconomic Factor, and Death of Mother as Related to Childbirth. Only the first of these showed any significant relationship between needs status and number of parents deceased. It was concluded that, "This factor indicates that the adolescents from homes where one parent is deceased tend to receive less recognition and affection from adults. In order to compensate for this lack of recognition and affection, they seem to be striving for attention from the opposite sex." —J. W. Fleming.

**526. BECK, SAMUEL J. Segregation—integration and some psychological realities.** *Amer. J. Orthopsychiat.*, 1958, **28**, 12-35. This series of discussions by S. J. Beck, W. A. Adams, D. F. de Villieis, T. G. Williams, M. E. Kirkpatrick, T. L. Eisenberg describes briefly and simply various aspects of the segregation problem. Adams sees it in the sociological terms of an "inconsistent cost system" that has been an irritant to Negroes; this leads to social characteristics attributed to genes. de Villieis views race relations in a long, historical perspective and emphasizes the role of historical tradition in influencing behavior patterns. Williams indicates Negroes have identification problems in forming both a "Negro ego" and a "white ego"; in the South, there are problems of ego development among white, too, in the attempts to understand the segregation that mores maintain. Kirkpatrick poses some interesting questions on the dynamics of administration that led to a successful integration of certain psychiatric facilities in Kansas City, Missouri. Eisenberg uses the experience of the Baltimore schools in integration to illustrate that firmness of administrators can succeed in a policy. —I. A. Kraft.

**527. BENE, EVA.** (Maudsley Hospital, London) **Suppression of heterosexual interest and of aggression by middle class and working class grammar school boys.** *Brit. J. educ. Psychol.*, 1958, **28**, 226-231. The attitudes of 153 grammar school middle class and 164 working class boys are compared on feelings regarding sex and aggression. Paper-and-pencil attitude measuring instruments were administered to boys in their classrooms. The results showed significant social class differences with middle class boys more frequently suppressing heterosexual interests, but no differences regarding suppression of aggression were found. —W. D. Smith.

**528. BLUM, ABRAHAM.** (Purdue Univer., Lafayette, Ind.) **The relationship between rigidity-flexibility in children and their parents.** *Child Developm.*, 1959, **30**, 297-304. The rigidity-flexibility rankings of 17 preschool children and their parents were compared. Before inclusion in the study, each child subject met a criterion of abstraction ability determined by the use of a modified form of the Weigl-Goldstein-Scheerer color-form block test. Instruments devised to measure rigidity were the Child Transition Test and Adult Transition Test, based on the concept of tolerance-intolerance of ambiguity as suggested by Frenkel-Brunswik. The multiple correlation of the child rigidity rankings with mother and father rankings was found to be significant, while the rankings of the children were found to correlate positively, but not significantly, with the rigidity rankings of either mothers or fathers. Findings were discussed in terms of further study of the combined influence of both parents upon the personality development of the child. —Author's Abstract.

**529. BURCHINAL, LEE G.** (Iowa State College, Ames) **Mothers' and fathers' differences in parental acceptance of children for controlled comparisons based on parental and family characteristics.** *J. genet. Psychol.*, 1958, **92**, 103-110. Differences between mothers' and fathers' mean parental acceptance scores were tested in a series of controlled comparisons. The subjects were 256 couples who had a child in the fifth grade and at least one other child. The test used was the Porter parental acceptance scale. Of 20 mean differences controlled on such basis as age, education, occupation, and residence, 12 were significant in showing the mothers' mean acceptance score to exceed the fathers'. Other results suggested that mothers' acceptance scores were related to the social status of the mothers, whereas fathers' scores showed

very little variation in relation to education and occupational classifications. —J. W. Fleming.

**530. BURCHINAL, LEE, GARDNER, BRUCE, & HAWKES, GLENN R.** (Iowa State Coll., Ames) **Children's personality adjustment and the socioeconomic status of their families.** *J. genet. Psychol.*, 1958, **92**, 149-159. Previous studies have indicated that children from middle class homes tend to show fewer indications of personality maladjustment than children from lower class homes. The present study investigates this relationship for rural and small town children. The subjects were 256 children drawn from fifth grade schools in several states. Maladjustment in the children was measured by the Rogers Test of Personality Development, and the socioeconomic status of parents was estimated by the occupation of the father and the educational level of both the father and mother. In general, the analysis of the children's mean adjustment scores tended to support the hypothesis that higher status children showed fewer indications of maladjustment. An unexpected finding was that children whose fathers had the highest level of educational achievement, post graduate study, showed greater indications of personality maladjustment than many of the children who came from homes where the fathers were less well educated. —From Authors' Summary.

**531. COWELL, CHARLES C.** **Validating an index of social adjustment for high school use.** *Res. Quart. Amer. Ass. hlth phys. Educ., Rec.*, 1958, **29**, 7-18. Three instruments for evaluating social adjustment are presented: a social behavior trend index, a personal distance scale, and a who's who ballot. The trend index of 20 dichotomous behavior items is based on pupil behavior patterns as judged by teachers. The personal distance scale depends largely on the pupil's social acceptance as judged by his peers. The who's who ballot is related to participation in games and other forms of group participation. Percentile scales are provided for junior high school boys on the social adjustment index and the personal distance scale. —H. H. Clarke.

**532. CRANE, A. R.** (Armidale Teachers' College, Univer. of New England, Australia) **Symposium: The development of moral values in children. IV: Pre-adolescent gangs and the moral development of children.** *Brit. J. educ. Psychol.*, 1958, **28**, 201-208. Information was collected from Teachers' College students in Australia and England about gangs to which they had belonged during their preadolescence. Of all students asked, about 90% of the men and almost 40% of the women had belonged to at least one such gang. In this way data revealed that all boys' gangs were at times occupied in some form of socially unacceptable ("delinquent") behavior. In discussing these facts, it is argued that belonging to such a gang is not necessarily an indication of future delinquent behavior. On the contrary, gang membership can be an important bridge between the kinship-based status conferred on the child by the family and the achievement-based status conferred by society at large. —Author's Summary.

**533. ELKINS, DEBORAH.** (Queens College, Flushing, N.Y.) **Some factors related to the choice-status of ninety eighth-grade children in a school society.** *Genet. Psychol. Monogr.*, 1958, **58**, 207-272. The following data were collected from 90 eighth-grade children and their families: (a) child's choice status taken from his sociometric position; (b) sociometric interviews to elicit reasons for choice; (c) diaries of out-of-school activities; (d) parent interviews focused upon parental satisfaction or dissatisfaction with the child; (e) responses to a series of open ended questions about worries, wishes, likes, etc.; (f) socioeconomic status; (g) intelligence and achievement status; (h) height and weight and age. The author's summary reports: "The study revealed the presence of certain constellations of factors which bore an affinity to choice-status: (a) Children who were flexible in role-performance, who had the ability to meet the needs of others, who could further the goals of the group, who displayed certain acceptable behavior patterns, were among the highly chosen. (b) There was a slight tendency also for highly chosen children to elicit responses of satisfaction from parents, to find satisfaction in performance of roles in the home, to be more intelligent, to be somewhat higher than others in socio-economic status, to

achieve higher academic scores, and to be younger. These factors appeared to aid the child in his assumption of certain roles and in the acquisition of behavior patterns which were directly related to his status among peers. (c) Children who displayed rigidity of role-performance, who were unable to meet the needs of peers, who blocked the goals of the group, who displayed certain objectionable behavior patterns, were among the least-chosen. (d) There was a slight tendency for the parents of least-chosen children to express dissatisfaction with their offspring; for such children to be dissatisfied with the home situation; for intelligence, achievement, and socio-economic status of families to be relatively low; and for children to be chronologically older than their peers. Again, these tendencies appeared to be related to children's acquisition of roles and of behavior patterns which hindered their progress in establishing themselves with peers." —A. L. Baldwin.

534. FARBER, BERNARD. (Univer. of Illinois, Urbana) **Effects of a severely mentally retarded child on family integration.** Monogr. Soc. Res. Child Develpm., 1959, 24, No. 2. \$3.00. Data on 240 families with severely mentally retarded children, aged 16 or under, were collected through interviews with both parents in each family. The sample consisted of Caucasian families, living in Chicago and suburbs, who were contacted through parent groups. Major results were: (a) Parents of a retarded boy at home tended to have a lower marital integration than parents of a retarded girl, particularly in families of lower social status. (b) Non-Catholic parents with a retarded child at home generally had a lower marital integration than those with a child in an institution. (c) Normal girls with an institutionalized sibling showed less maladjustment than did girls with a retarded sibling at home. (d) Normal boys with an institutionalized sibling showed greater maladjustment than did boys with a retarded sibling at home. (e) Degree of interaction between the wife and her mother was related directly to marital integration. Degree of interaction between the husband's mother and the family, however, was related inversely to marital integration. Generally, the results of the study were in the direction anticipated in the hypotheses. It was concluded that the findings could serve as guideposts in decisions pertaining to the management of severely retarded children. —Author's Abstract.

535. FEINBERG, MORTIMER R., SMITH, MAX, & SCHMIDT, ROBERT. (City College, New York City) **An analysis of expressions used by adolescents at varying economic levels to describe accepted and rejected peers.** J. genet. Psychol., 1958, 93, 133-148. Differences among socioeconomic levels in the nature of sociometric ratings were explored. The subjects were 13- to 15-year-old boys, 1050 from high income, 775 from middle income, and 650 from low income families. The boys chose four classmates as possible seatmates, rejected four others, and listed adjectives which described these peers. In many areas of personality all three income groups were in agreement about their standards. Where group standards were not in complete agreement, the two lower income groups revealed a single set of values, whereas the high-income group had quite different standards. Personality attributes characteristic of an income level, and those shared by two or more levels, are indicated. —From Authors' Summary.

536. GINZBERG, ELI. (Columbia Univer., New York City) **The changing pattern of women's work: some psychological correlates.** Amer. J. Orthopsychiat., 1958, 28, 313-321. For the last 60 years many psychiatrists have sought to visualize problems of individual adjustment and social conflict largely in terms of the psychology of the unconscious. Penis envy, faulty identification, masochism, rejection, ambivalence—the entire gamut has been employed to explain modern women. But woman, like man, lives in a world of reality characterized by opportunity and choice. The environmental conditions affecting her opportunities to work have an important impact on her pattern of adjustment. The choices that she makes with respect to work are doubtless influenced by her unconscious among other things, but surely not any more than her unconscious is formed by the world in which she grows up and to which she must adjust. Economists and sociologists need assistance from psychology, but psychologists in turn need an understanding of the role of economic institutions

in the patterning of behavior. And no institution has a more pervasive influence on human behavior than work. —Author's Summary.

**537. GROSZ, HANUS J., & MILLER, IRVING.** (Inst. Psychiatric Res., Indianapolis, Ind.) **Sibling patterns in schizophrenia.** *Science*, 1958, **128**, 30. In this study of 156 cases, the authors found that "no ordinal position appears to carry specific vulnerability to schizophrenia within the three-sibling constellation."

**538. HILL, GEORGE E., & HOLE, RICHARD M.** **Comparison of the vocational interests of tenth grade students with their parents' judgments of these interests.** *Educ. psychol. Measmt*, 1958, **18**, 173-188. Mothers and fathers of 20 girls and 20 boys answered the Kuder Vocational Preference Record as each thought their child would. Mothers did better than fathers, and parents agreed more with each other than with their child, but 80% match the two or three top interests of the child. —S. G. Vandenberg.

**539. HOLT, K. S.** **The home care of severely retarded children.** *Pediatrics*, 1958, **22**, 746-755. The main practical problems reported in 201 families with mentally retarded children in Sheffield, England were limitation of family activities (41%), constant supervision (31%), extra expense (29%), exhaustion of mother (19%), frequent attention at night (15%), nursing care (7%) and exhaustion of father (5%). The main emotional problems reported were disappointment, guilt, shame and a sense of inadequacy. —M. C. Templin.

**540. JONES, MARY C.** (Univer. of Calif., Berkeley) **A study of socialization patterns at the high school level.** *J. genet. Psychol.*, 1958, **93**, 87-111. The purpose of this study was to specify some of the factors which seem to influence high school students participation in extracurricular activities. The subjects were members of the Adolescent Growth Study, and were those who fell at the extremes of a frequency distribution of "mentions" in the newspaper of the school they had attended for three years. 9 males and 9 females formed a "low-mention" group, and 12 males and 12 females a "high-mention" group. These two groups were compared on a large number of attributes. Among the results were that CA was not a differentiating factor, but skeletal age was relatively advanced among high-mention boys and among low-mention girls. Both sexes in the high-mention group were more frequently rated by adults as making a good impression on the basis of appearance, and high-mention girls were rated significantly higher on Expressiveness, Buoyancy, Poise, and Prestige. A Guess Who rating technique showed that high-mention students were almost consistently above average on many prestige traits. High-mention boys were rated significantly higher on need for recognition (drive to excite praise and commendation) and control (to control one's environment, by suggestion, persuasion or command). Variables which showed little or no relationship to frequency of mention were intelligence, physical ability, socioeconomic status, various measures of self concepts, and such attitudes as prejudice toward outgroups and ethnocentric tendency. Role patterns are discussed in terms of selected individual descriptions. Some global follow-up information is presented also. —J. W. Fleming.

**541. KREMER, JOSEPHINE, & DAY, SAVANNAH.** **Indoor play areas for preschool children.** *N. C. Agric. Exp. Station Bull.*, 1959, No. 410. This study used repeated observations of preschool children playing at home to investigate space and furnishings of home play areas. Of the 63 farm-owner families studied in North Carolina, 43% had established play areas in at least one room for their preschool children. When there were no children's furnishings in a room, the child played in the center of the room. When the families provided play areas with children's furnishings and play materials, the child tended to play in these areas, usually located in one corner or along one wall of a room. The data suggested that amount of space used for play depends on other uses of rooms, arrangement of furnishings, number of children playing, organization of play space, and the mobility of the child. —H. Marshall.

542. LANTAGNE, JOSEPH E. **Interests of 4000 high school pupils in problems of marriage and parenthood.** Res. Quart. Amer. Ass. hlth phys. Educ., Rec., 1958, 29, 407-416. In an earlier study the author had developed the inventory used and had applied it to survey the marriage and parenthood interests of approximately 8000 college and high school students. In this study a total of 4000 high school pupils were inventoried, 500 boys and 500 girls for each of the four high school years. The sampling was taken from five junior high schools and nine senior high schools in California. Among the conclusions reached were the following: (a) The interest of high school students in marriage and parenthood is significant. (b) The items of greatest interest follow a pattern according to sex; however, the interests for both sexes have considerable similarity. (c) The greatest interest of boys is in juvenile delinquency prevention, while for girls it is in pregnancy problems. (d) Girls demonstrate an over-all greater mean interest than do boys. (e) Percentage of interest is not altered significantly by religious belief. —H. H. Clarke.

543. RUESS, AUBREY L. (840 S. Wood St., Chicago, Ill.) **Some cultural and personality aspects of mental retardation.** Amer. J. ment. Def., 1958, 63, 50-59. Four hypotheses were formulated to study the influence of social class status on estimates of intelligence, potential for intellectual functioning, and emotional factors which might inhibit learning in mentally retarded and nonretarded children. High- and low-status subjects were selected on the basis of monthly rent, income, and years of schooling. All subjects ranged in age from 8-0 to 9-11. The IQ scores (Otis) of two groups of children ranged from 70 to 85, or two groups from 90 to 110, and of one group from 111 to 130. A differing number of children was administered the tests, which were the Goodenough Draw-a-Man, Davis-Eells, Otis, TAT, and Rorschach. The hypothesis receiving support was that for mentally retarded children the Rorschach revealed greater potential for intellectual functioning among low-status children than among high-status children. Other results suggested that, irrespective of social class, retarded children tend to obtain higher scores on the Davis-Eells and Goodenough tests than on the Otis, whereas the opposite tendency might be true for nonretardates. —J. W. Fleming.

544. TOMAN, WALTER. **Die Familienkonstellation und ihre psychologische Bedeutung.** (The psychological interpretation of the family constellation.) Psychol. Rdsch., 1959, 10, 1-15. The basic thesis is that the strongest determinants in human development in general and in psychopathology in particular are those factors which begin earliest and continue regularly over the longest time span: parents and siblings. It is hypothesized that marriage and heterosexual relationships are more likely to result in happiness and success if the marriage constellation of each of the partners resembles the sibling and family constellation during their childhood. For example, if an older brother of a sister marries the younger sister of a brother, chances for happy marriage are optimal since he is used to a younger girl, she is used to an older male; consequently, there are no conflicts over seniority; furthermore, both have been used to the opposite sex. On the other hand, if the younger brother of a brother marries the younger sister of a sister, chances for happy marriage are minimal; conflict over juniority will arise; both might have difficulty in accepting the opposite sex. As in their childhood family constellation both want an older sibling in their marriage partner. A case study demonstrates how marriage partners of this kind of constellation made an "older sibling" out of their child and the pathology that resulted. Many different combinations of the family constellation including single child, many children, death of one or both parents, death of siblings and other traumatic changes in the family constellation are discussed. Empirical support is cited from an analysis of 20 randomly selected cases of children receiving psychological counseling. 10 out of 16 boys were younger siblings; 12 out of 16 boys came from families without sisters; none of the boys was a brother to one or several girls. Best prognosis is made for the family in which an older boy is followed by a sister and in the case of children who have many siblings. —R. E. Muuss.

545. VERMA, R. M. (Patna, India) **Sociological variables and intelligence of the school-going population.** Educ. & Psychol., 1958, 5, 165-170. In rural elementary



schools of Bihar, 286 seventh grade boys were tested on Mohsin's test of general intelligence, in Hindi. Mean scores did not vary with socioeconomic level, as rated by the author following a 20-minute interview with each boy, but did differ for various paternal occupational groupings. Family size did not systematically affect intelligence scores. —R. N. Walker.

546. WITRYOL, SAM L., & CALKINS, JAMES E. (Univer. of Connecticut, Storrs) **Marginal social values of rural school children.** *J. genet. Psychol.*, 1958, 92, 81-93. The content and age trends of 3208 responses to an open-end questionnaire on dares obtained from 720 rural school children in Grades 4 to 12 were analyzed and interpreted in terms of marginal social values. The proportions of dare categories reflecting challenges to various forms of authority increased in magnitude from the childhood to the adolescent years. The category involving direct challenges to physical danger dropped sharply in relative proportion with age, and was accorded more emphasis by boys than girls throughout most of the age range. Risking social aggression toward the opposite sex was predominantly a female value, reaching a peak for females at Grade 9, and dropping steadily until Grade 12, where the female and male proportions in this category were approximately the same. These and other dare categories were interpreted as marginal social values, a special type of motivation when incentives possess properties of negative threat as well as positive prestige value. The generative power of this special type of motivation and concomitant conflicts were discussed in terms of theoretical properties, as well as practical outcomes in child and adolescent behavior. —Authors' Summary.

### Book Notices

547. ALLAN, W. SCOTT. **Rehabilitation: A Community Challenge.** New York: Wiley, 1958. xvi+247 p. \$5.75. Advances in medicine progressively have led to a more comprehensive conception of medical care. This conception embraces the employment of specific preventive measures, early diagnosis and therapy, procedures designed to limit disability and, if disability occurs, rehabilitation. There is evidently overlap and interweaving of these aspects of complete medical care. This book, as its title indicates, is primarily concerned with the last of the interrelated series of services. The first four chapters cover general considerations, and later sections are devoted to the physician, nurse, therapist, and "counselor." There is a discussion of the role and relative importance of hospitals and rehabilitation centers. Services for the ambulatory patient are considered, but the potential contributions of public health nurses are dealt with in a single sentence. The chapter on vocational placement is well presented except for omission of reference to state employment services, with their selective placement counsellors. Legislation and insurance programs are outlined and described with sufficient detail to provide a basis for more complete study. The book is intended "for the general reader, the student and the specialist." It is, obviously, not easy to address such a broad spectrum of readers. It is surprising that little reference to children is made. The extensive crippled children's programs under Title V of the Social Security Act are scarcely referred to. The Children's Bureau which has administered this Act since 1935 does not appear in the index, the bibliography, nor, unless this reviewer has overlooked it, in the text. The author recognizes that a vast amount of effort is needed in rehabilitation, effort which requires national planning and substantial financial support. It is all the more surprising that he sees only a limited field for our government. "The national government," he states, "may continue its programs for direct benefits and services to veterans, federal employees, and the like, but any further extension of federal funds or services into general medical care or rehabilitation for the disabled civilian, either child or adult, seems undesirable." The 85th Congress did not deem it undesirable,



but following the testimony of distinguished experts at hearings, authorized an increase of \$5 million in the annual appropriation for grants-in-aid to states for handicapped children's services. Moreover, the Office of Vocational Rehabilitation in April 1958 announced grants to aid in supporting 26 new projects to restore severely handicapped persons to employment. Great as the need is for state and local assumption of responsibility and for voluntary agency activities, it seems obvious that the Federal Government must continue to play an essential role of leadership and support. In summary, this book is useful primarily as a survey of post-hospitalization rehabilitation services for adults, but is limited in scope and concept. W. M. Schmidt.

548. ARGYLE, MICHAEL. *The Scientific Study of Social Behaviour*. New York: Philosophical Library, 1957. xiii+239 p. \$6.00. This is an attempt at a long, critical review of work on social behavior, cutting across fields of psychology in order to cover social interaction in many settings. The book is divided into two parts: (a) methodology, and (b) generalizations and theories. The discussion of methods is very clear. The three chapters meant to summarize the content of the field (interaction between two people, small social groups, human relations in industry and other social organizations) cover a wide range. The book provides a good overview for the newcomer to the field, but he will want to know more about the studies than appears here. A useful bibliography is appended. Workers in child development may find useful the review, short though it is, of family interaction. The book may be useful in suggesting directions for research on family interaction, an area which sorely needs attention. —Z. Luria.

549. CRUICKSHANK, WILLIAM M., & JOHNSON, G. ORVILLE. (Eds.) *Education of Exceptional Children and Youth*. New York: Prentice-Hall, 1958. xiv +723 p. \$6.95. This volume defines our current understanding of education for the major groups of exceptional children. Special education for exceptional children is a many-faceted field which requires the understanding and experiences of authorities and specialists from each of its many areas. For this reason, the editors have selected those individuals who by training and experience are qualified to represent one or more of the major areas. Part I, the Introduction, is written by the Senior Editor, William M. Cruickshank. He discusses the development of education for exceptional children, current educational practices with exceptional children, and the exceptional child in the elementary and secondary schools. Part II considers intellectual differences and contains presentations by James M. Dunlap on the education of children with high mental ability, G. Orville Johnson on the education of mentally handicapped children and Rudolph J. Capobianco on the training of mentally deficient children. Part III contains six chapters in the area of physical differences. Fredericka M. Bertram considers the education of partially sighted children; Georgie Lee Abel, the education of blind children; Charlotte B. Avery, the education of children with impaired hearing; Stanley H. Ainsworth, the education of children with speech handicaps; Frances P. Connor, the education of crippled children and the education of children with chronic medical problems. Part IV contains a single paper representing emotional differences. William C. Morse considers the education of socially maladjusted and emotionally disturbed children. Administration comprises Part V. G. Orville Johnson considers guidance for exceptional children while Paul H. Voelker considers administration and supervision of special education programs. Each presentation concludes with a summary, a collection of footnotes for the chapter, and a listing of selected supplementary reading. This volume will no doubt have wide appeal. Special education for exceptional children is receiving a great deal of interest and support on the national, state, and community levels. Educators, administrators of special education programs, education boards, social workers, psychologists, physicians, rehabilitation workers, parents, and many others will find this a useful reference book. This volume will be of particular value as supplementary reading for college courses dealing with exceptional children. It is highly readable, contains much in the way of factual and descriptive material including resources together with specific recommendations for legislative and educational needs and practices. —A. M. Kaplan.

**550. EISSLER, RUTH S., et al. (Eds.) *The Psychoanalytic Study of the Child. Vol. XII.*** New York: International Universities Press, 1958, 417 p. \$8.50. This volume contains a collection of papers by well established writers in the field of psychoanalysis, including an address which was read by Heinz Hartmann before the New York Psychoanalytic Association in honor of Ernst Kris. There are four sections with appropriate papers. The first section, Contributions to Psychoanalytic Theory, includes the following: The Nature and Development of the Concept of Repression in Freud's Writings (Charles Brenner), The Childhood of the Artist (Phyllis Greenacre), On Normal and Pathological Moods (Edith Jacobson), On Defense and Development: Normal and Pathological (Jeanne Lampl-De Groot), Some Thoughts on Interpretation in the Theory and Practice of Psychoanalysis (Rudolph M. Loewenstein), and Psychic Energy and Mechanisms of Defense (Seymour L. Lustman). While there is no formal or structured continuity among the papers, four of the six papers concern themselves with psychological defense. This varies from an analysis of Freud's concept of repression based on 29 references by Freud to a consideration of the quantity and source of neutralized psychic energy and basic mechanisms of defense with a focus on observational and experimental studies of neonates and infants in the Lustman paper. A second section, Aspects of Early Development, contains the following papers: Anxiety Related to the Discovery of the Penis (Gabriel Casuso), The Use of Prediction in a Longitudinal Study (Marianne Kris), The Earliest Dreams of a Young Child (William G. Niederland), and Inconsistency in the Mother as a Factor in Character Development (Annemarie Sandler, Elizabeth Dauntton, and Anneliese Schurman). The papers by Casuso and Niederland are all descriptive illustrations of various segments of behavior in the preschool child. Casuso reports observations made on his son from 10 to 12 months of age. Niederland presents the content of 11 dreams elicited from a child between his 17th and 47th month. The paper by Sandler et al. concerns itself with the manner in which a maternal disturbance can affect the development of a child's character and is based upon the analyses of three children, all girls, 6, 7 and 8 years' of age, at the Hampstead Child Therapy Clinic in London. Both mother and child received treatment simultaneously. The similarities and differences between the child and its mother are described together with an analysis of the effects of the mother's behavior upon the child's development. The Kris paper concerns itself with an appraisal of the longitudinal study in child development with a focus on "varieties of health" rather than pathology per se. The third section, Clinical Contributions, include the following papers: Preadaptive Factors in the Etiology of Female Delinquency (Peter Blos), Treatment of Under-Fives by Way of Parents (Erna Furman), Some Aspects of Psychoanalytic Technique in Adolescents (Elisabeth R. Geleerd), Motility in the Therapy of Children and Adults (Bela Mittelman), A Neurosis in Adolescence (Nathan N. Root), Delinquency: A Defense Against Loss of Objects and Reality (Margarete Ruben), and On Changes in Identification from Machine to Cripple (Lisbeth J. Sachs). This section concerns itself with various aspects of therapy in the preschool child as well as the adolescent. The fourth section, Applied Psychoanalysis, includes: On "Seeing the Salamander" (Robert Plank) and The Childhood and Legacy of Stanislavski (Philip Weissman). While this volume should be of interest to those clinicians in psychoanalysis, psychiatry, social work, and psychology who view behavior within a psychoanalytic framework, there are papers which will be of interest to students of child development and personality theory. There are some papers (Kris, Casuso, Niederland) which should be of interest to all students of child development. The Piaget-like behavior descriptions and consideration of the problems inherent in prediction based upon a longitudinal research design are all of current interest in child development. Other papers (Blos, Furman, Geleerd, Mittelman, Root) will be of interest to those who engage in therapy with children and adolescents. The papers by Brenner, De Groot, and Lustman will be of particular interest to students of personality theory. —A. M. Kaplan.

**551. FLEMING, C. M. *Teaching: A Psychological Analysis.*** New York: Wiley, 1958. xiii+291 p. \$5.00. This book discusses much of the content typically taken up in educational psychology courses in the usual teacher training curriculum

in the United States. Topics such as motivation, learning, growth, measurement, and educational research constitute the core of the volume. A number of reactions were stimulated in the reviewer during a close reading of the content. First, a real question exists as to the suitability of the book as a text in that frequent references to several articles and whole books are contained in a single sentence. Rather than building basic concepts, they cue and reorganize meanings already possessed by the reader of the original source materials. In the area of the social situation of the class and the self-concepts of the pupils, these references are coupled with more incisive insights than found in the usual educational psychology discussions. The reviewer kept wanting to see some of these points developed at length, for in his opinion this was the high point of the book. Second, the discussion of learning is quite limited: the author dispatches the works of Thorndike, Watson, Skinner, Hull, and others with "They have, by their nature, little relevance to the behavior of human beings in schools or homes or workshops" (p. 69). Many educational psychologists might agree but there is no systematic and careful replacement with discussions of concept formation, problem solving, or critical thinking. Finally, the over-all organization of the book suffers, as do all current educational psychology texts, in its failure to integrate into a consistent theoretical structure the extremely divergent domains historically relegated to educational psychology. As an illustration, the chapter dealing with personality measurement appears in a section devoted to assessment with but few references to earlier discussions of motivation, self-concepts, and delinquency. In summary, careful study of the early discussions of the teacher in the act of tuition, the emphasis on the motives of participation and appreciation, and the nature and influence of the pupil's self-conception will repay the careful graduate student who has time to reflect on the accumulated insights, read the original numerous and excellent references, and apply the ideas to his own teaching and research. The undergraduate probably would miss the point. —L. M. Smith.

**552. GARN, STANLEY M., & SHAMIR, ZVI. *Methods for Research in Human Growth*. Springfield, Ill.: Charles C. Thomas, 1958. xi+121 p. \$4.75.** In a Foreword, Dr. A. Ashley Weech suggests that growth research should state "what must be considered abnormal" so that the physician can define the "limits of what is normal." In answer to this the authors state that the present volume "is more a guide to methods than a textbook of growth research." In this vein the reader must expect why, how, when, rather than what and where. There are a lot of questions, few answers. A very sensible keynote is struck when it is advised that a specific problem must be defined before a research program is set up. The authors suggest using a rifle, rather than a shotgun, as it were: don't shoot at the entire area, hoping a random pellet will hit the bull's-eye. Their words on sampling are cogent, especially the admonition to enroll 500 in order to end up with 100 five years later. The examination schedule is extremely ambitious: quarterly from birth to one year, semiannually to 18 years, annually after that; as near birthdates as possible and feasible. There is a good section on radiologic techniques and precautions. If these are followed, say the authors, "serial roentgenograms need not be deleted from a growth program, because of fear of radiation exposure." Those of us in growth research are prepared to accept this, but I am afraid geneticists will not be satisfied with a mere listing of safeguards and a sweeping statement—especially since each subject will be X-rayed (and the total number of films per examination is not given) 38 times by the age of 18 years. Here is a research area that is currently vulnerable. The chapter on head and face does not do justice to the well-developed area of roentgenographic cephalometry. The problem is acceptably stated: "how atypical facial growth can be, yet still lead to a satisfactory occlusion." The roentgenography of the infra-cranial skeleton is excellently handled: long bones, hand and foot, axial skeleton. Users of "Atlases" are very wisely advised that for a child to be "behind" is not "bad," or to be "ahead" is not "good." In the dentition it is urged that there is great need for normative material, since most of present data are based on cross-sectional studies. The authors are much at home in offering techniques for the study of skin and hair. There is a thorough discussion of the study of bone, muscle, and subcutaneous fat via a cross-section of an X-ray film, and of subcutaneous fat via pinch-calipers. Sexual maturation

is illustrated by Garn's analysis of areolar changes. Final chapters on statistical and graphic methods suggest basic attention to measures of pattern similarities and to age-associated traits. It is warned that "no child gains as smoothly as the massed-data trend lines would suggest," and, further, that "age-size trends never fully indicate the growth 'spurt' characteristic of adolescence." So much for what's in the book. I've already said there are few answers in this book; it wasn't designed for that purpose. This is OK for the more sophisticated students of growth who are research-grounded and oriented. I am afraid that will cut out a much larger audience who really should be instructed. I'm in contact with a lot of clinicians, nursing groups, public health units, school personnel, etc., who are glad to leave the problems to a devoted few—and Garn is tops in that small band. This book will, if they peruse it, make them aware of the intricacies of growth research. But I fear they'll return to the platitudinous literature now available to them, for answers (good, bad, or indifferent) are still in demand. May we hope that methods, so well launched in this volume, will eventuate in a "results?" —W. M. Krogman.

**553. GLICKMAN, ESTHER. Child Placement Through Clinically Oriented Casework.** New York: Columbia Univ. Press, 1957. xii+448 p. \$5.75. The changes which have taken place in professional practice in child caring agencies are related to (at least) two important developments. First is the change in the population served; over the past 15 years we have seen the disappearance of the so-called "dependent-neglected" child, and his replacement by the child who has been traumatised by his life experience. Second, we have seen the deepening understanding of the dynamics of human growth and psychosexual development and the incorporation of these understandings into professional case work practice. Glickman's book is a treatise on the application of clinical materials to the particular problems of the child placement worker. Beginning with a lucid description of the intake process, she carries the reader along into a chapter dealing with the assessment of the psychopathology of the child's own family. There follows a description of various types of placement facilities and criteria for their differential use. The main body of the text concerns itself with a detailed analysis of the therapeutic management problems which characteristically arise in the source of the child's life while in the care of the agency, and upon termination of the agency's role as parent surrogate. A central issue which might arise in the mind of the reader is related to the problem of squaring the dual responsibility of the placement worker. Glickman assumes the central responsibility of the worker as focusing around the child's need for help in managing the disturbing feelings which derive from the traumatic nature of the separation experience. The worker, however, is also confronted with the agency requirement that he represent the agency in his management of the child's reality. In all, this is an excellent documentation of an important area of professional practice in behalf of children. —I. A. Kraft.

**554. GOINS, JEAN TURNER. Visual Perceptual Abilities and Early Reading Progress.** Chicago: Univ. of Chicago Press, 1958. 109 p. \$2.00. (Suppl. Educ. Monogr., No. 87) This monograph is an intensive investigation of visual perceptual abilities and their relationship to the reading progress of first grade children. Purposes were (a) to measure the visual perceptual ability of first grade children and to correlate these abilities with their achievement in reading and (b) to measure the effect of visual form training on reading progress. The 120 children were taken from the University of Chicago Laboratory School and a Chicago public school. Visual perceptual ability was measured by 14 unpublished tests developed by Thelma G. Thurstone. The subjects were given a reading test at the beginning of the year and at the end of the school year in order to measure reading progress. Renshaw's tachistoscopic visual form training was given to one half of the group while the other half served as a control. Analysis of the data showed: (a) that there were large individual differences on each of the visual perception tests; (b) that the visual perception tests of Pattern Copying and Reversals and the combined perceptual score correlated most highly with reading achievement; (c) two factors of visual perception, one, the speed of perception, and the other, the strength of closure, the latter factor

being related to reading skill; (d) a bimodal distribution on the visual perception tests of Picture Squares and Reversals which may indicate distinct types of perceivers; and (e) that tachistoscopic visual form training improved the perceptual skills of the initially superior readers only and not the group as a whole. Every worker in the reading and related fields should find this study a valuable and helpful contribution. —L. Harrell.

**555. ILLINGWORTH, R. S. (Ed.) *Recent Advances in Cerebral Palsy*. Boston: Little, Brown, 1958. 389 p. \$10.00.** As a reflection of the tremendous stimulus given to research in cerebral palsy and to services by voluntary agencies and government here and abroad, there have recently appeared a spate of books dealing with this dread affliction. The book under review is the newest and, in a way, one of the most comprehensive since it deals with the etiologic, psychological, educational, and therapeutic aspects of cerebral palsy. However, it is limited to the cerebral palsied child. The authors of the various chapters are drawn from England, Australia, and the United States, and are, many of them, recognized experts in their respective fields; names like Phelps, Perlstein, Courville, and Schonell will attest to the authority with which the contents of this book speak—within the limits of the little knowledge we now have about cerebral palsy, especially about its causes and prevention. Successive chapters deal with incidence and classification, structural changes in the brain, diagnosis, handicaps, psychological and educational problems, available services, equipment, the therapies, orthopedic surgery, and neurosurgery. Since the chapter describing statutory and voluntary services is limited to the United Kingdom, there is appended to what is presumably the American edition a chapter by Messner outlining the kinds of activities now being carried on in the United States. Schonell, in her chapter on teaching methods, says, "A child with cerebral palsy is a child first and a case of cerebral palsy second." This could well stand for the theme of the entire book. "The gaps in our understanding of cerebral palsy are still wide and much remains to be done, especially in regard to prevention. But the outlook for the spastic child is now very much better than it was fifteen years ago, and this book will promote further progress." —I. Altman.

**556. INHELDER, BÄRBE, & PIAGET, JEAN. *The Growth of Logical Thinking from Childhood to Adolescence*. New York: Basic Books, 1958. 356 p. \$6.75.** An experimental study of intellectual development from 5 to 15 years, adds the adolescent period to the usual genetic scale described by Piaget and his co-workers. The results show that there is a growth of logical thinking beyond the 11 to 12 year level leading to another level of equilibrium at age 14 to 15. The experiments include 15 different projects on the induction of various laws and were directed by Inhelder, who used varied assistants, materials, techniques, and about 1500 children in individual interviews. Piaget worked out the analytical tools to interpret the results of these experimental projects and discusses formal thought as well as on concrete structures typical of children's thinking and formal structures from which laws stem the principal characteristics of adolescence. The authors joined in writing the final chapter on adolescent thinking. They note that the growth of formal thinking as well as the age at which adolescence itself occurs remain dependent on social as much as and more than on neurological factors. They show that the most important features of adolescence are the ability to use hypothetical reasoning based on the logic of all possible combinations and the ability to perform control experimentation. As for the affective innovations found at this age, they are as in previous stages parallel to intellectual transformations. This book is well organized and the materials are efficiently presented graphically as well as in writing and they are most appropriate and stimulating. The method of testing is more specifically geared toward discovery of laws by the child and the process of induction as well as of deduction. The careful study of the psychology of adolescence is suggestive and could lead to fruitful pedagogical investigations. —L. Muller-Willis.

**557. KRUGMAN, MORRIS (Ed.) *Orthopsychiatry and the School*. New York: Amer. Orthopsychiat. Ass., 1958. xii+265 p. \$4.00.** This book, with contribu-



tions by prominent people in the field of psychoanalysis, general psychiatry, social work, and clinical psychology and educational psychology, is divided into five major sections: (a) orthopsychiatry's help to education, (b) orthopsychiatry and programs of learning, (c) orthopsychiatry and school mental health, (d) teacher education in mental health, and (e) orthopsychiatry and adolescent problems. The articles are of uniformly excellent quality. They attempt to delineate in a clear way the problems germane to the section. They discuss the limitations the extent of the role that orthopsychiatry can play in education. This is discussed at the various levels of kindergarten, elementary, and older school situations. Some excellent articles on the role of emotional development and status with relationship to learning are enclosed by Fabian, Liss, and Rivlin. The third section has articles which delineate various approaches to mental health problems in a public school system. One thing which is omitted from this and other articles is the use of methods and adjuncts to psychotherapy, such as psychopharmacologic agents. —I. A. Kraft.

**558. MORLEY, MURIEL E. *The Development and Disorders of Speech in Childhood*.** Baltimore: Williams & Wilkins, 1957. xviii+440 p. \$9.00. This book is a unique contribution since it considers disorders and defects of speech and language in relation to the developmental process. Although the book draws upon a substantial variety of published research, it is based in large part upon the research and remediation experience of the author. It includes the results of the observation of speech and language development in all children born in an English community during May and June 1947, the more detailed study of 114 children who are a representative sample of the community group, and a detailed study of the incidence and type of speech disorders of 162 children with speech problems between the ages of five and 15 years. Developmental, deviant, and remedial content are presented in six sections. One deals with the patterns of speech development as they emerged from the community study and includes discussions of the method of investigation, the development of normal speech and speech disorders in the first seven years of life, and their relationship to sex, position in the family, socioeconomic status and various environmental conditions. Another considers the delayed development of speech in relation to mental retardation, hearing defects and aphasia. A section on defective articulation presents a discussion of types and etiology of defects and some general principles for the treatment of defective articulation which may be due to causes such as partial hearing loss and structural abnormalities. The last three sections discuss the symptoms and treatment of stammering, speech disorders in twins, and the relation between lateral dominance and speech development and disorder. —M. C. Templin.

**559. NYE, F. IVAN. *Family Relationships and Delinquent Behavior*.** New York: Wiley, 1958. xii+168 p. \$4.95. This book represents a comprehensive research report on the author's study of the effects of parent-adolescent relationships on the occurrence of delinquent behavior. The study was an attempt to measure the theoretical question of the role of social control as exercised by the family in the restriction of deviant social behavior. The author gives an incisive discussion of the problem of defining delinquent behavior, pointing out the inadequacies and biases introduced when institutionalization or police records are used as criteria. To overcome these difficulties he employed anonymous questionnaires with his sample of 25% of all boys and girls in grades 9 through 12 in three medium-sized Washington towns (10,000 to 30,000). The questionnaire including family relationship items was completed in usable form by 780 students. Delinquency was judged by responses to a questionnaire containing 23 items covering law violations and anti-social behavior. Using the Guttman technique a scale of 7 items having unidimensionality was derived which had satisfactory reproducibility for boys. Because of the large number of responses in a single response category (did not commit the act), the girls' delinquency scale was used as a quasi scale without image analysis. The delinquency scale discriminated well when tested with training school and noninstitutionalized adolescents. An attempt was made to eliminate from the sample over-conformers and those who admitted to "every crime in the book." Because the items were scalable and the scale held up well in discrimination and reliability studies, the author accepts it as a valid



measure of undetected delinquencies. Over 400 analyses were undertaken using the scale as criterion to investigate relationships of delinquent behavior to family interaction. The adequacy of checks on sets such as acquiescence and tendency to go to extremes may be questioned by some readers. The author failed to find any differences among socioeconomic levels for rate of delinquency. He emphasizes the important difference between this finding and that generally reported when arrest or commitment are used to define delinquency. Less delinquency was found in families in which parents and children attend church regularly, in small families, in non-mobile and in rural families. There was a much smaller association between broken homes and delinquency than is found in institutional cases; the chief source of variance pertained to happiness of the marriage which was related to nondelinquency in the children. Working mothers produced more delinquent children than nonworking mothers. There was only slight association between delinquency and spatial mobility. Rejection of the parents by children appeared to be a much more powerful cause of delinquency than rejection of children by parents. The disciplinary role of fathers was more closely related to delinquency than that of mothers. Nondelinquent boys rated their parents high on both affection and discipline, while these characteristics of parents were negatively correlated for girls. A U-shaped distribution was found relating nondelinquency to amount of freedom from parental control. A positive association was found for closeness of family and nondelinquency. The author found that internal and indirect controls are more crucial for boys than for girls. Agreement with positive parental values was significantly related to nondelinquency for boys and girls. A positive relationship was found between amount of advice about sex from fathers and delinquency in girls. There was no other association between counseling on sexual matters and delinquency. The author concludes that "the more efficient the provision that is made for meeting adolescent needs in institutionalized behavior patterns, the less need there is for control of any other type; the more effective are the mechanisms of indirect control, the less need for direct control." This careful study will be of special interest to sociologists, social workers, and psychologists working in the area of juvenile delinquency. It is a major contribution to the understanding of social control as exercised by parents and delinquent behavior of adolescents. It does not attempt to relate the findings to earlier family relationships, to developmental phenomena, or to other sources of social control. —R. Wirt.

**560. ROBERTSON, JAMES. *Young Children in Hospitals*. New York: Basic Books, 1959. 136 p. \$3.00.** This book graphically points up the need for more understanding care of young children in hospitals. The author feels that just as the principle of asepsis is employed to coordinate all aspects of the physical health of a patient, a comparable psychological principle of child care is needed to assure the mental health of young children in hospitals. He reminds the reader of the dependency of the young child upon the mother and of the dangers involved in separation at an early age. The three phases of a child's "settling in" to a hospital are described under protest, despair, and denial. The latter two phases are often misconstrued by professional personnel to mean that the child has adjusted to the situation. Examples are given of children who demonstrate disturbed relationships as the result of hospitalization. The author advocates that young children not be admitted to hospitals or that mothers be admitted with their children and allowed to help care for them. He cites hospitals which are making this possible despite traditional limited facilities. Some suggestions are included for the preparation of doctors, nurses, and hospital administrators which would assure care based upon understanding of children's needs. One chapter is devoted to helping parents prepare a child for hospital experience. The author pleads for understanding of parents and for the inclusion of parents in the care of sick children. This book should be valuable to parents as well as to professional personnel who are concerned with young children in hospitals. —F. Erickson.

**561. SCHILLER, CLAIRE H. (Ed.) *Instinctive Behavior*. New York: International Universities Press, 1957. 328 p. \$7.50.** A renewed interest in "instinct"—complex behavior patterns which may be elicited by appropriate signals without apparent rehearsal or which are established by sharply limited number of associations

early in life—is rounding out the modern American psychologist's interest in learning. This collection presents several papers from the European ethological literature (the source of much of the current attention to instinct) hitherto unavailable in English translation, and one important original paper by Paul Schiller published posthumously. These papers will add greatly to the background of information needed by psychologists for the adequate interpretation of the behavior phenomena emphasized by ethologists. Included are von Uexküll's paper defining the Umwelt, and Lorenz' original paper on the function of species members as releasers of "social behavior." Another paper by Lorenz treats critically the concept of instinct, achieving a much more adequate construct for this vexing term than that with which many American psychologists are familiar. Lorenz and Tinbergen treat the concept of taxis and relate it to instinctive action in their famous paper on the egg-rolling behavior of the Greylag goose. The original Tinbergen and Kuenen experiment with feeding behavior in young thrushes is also included. This paper, in some respects the prototype of much modern experimental work with behavior in animals, carefully explores the dimensions of the stimulus which will evoke gaping behavior in the young birds. Size, form, position, angle of presentation and the like of the stimulus are all carefully and systematically explored. In another paper Lorenz makes his argument for the proof of evolutionary phylogenetic relationships through the study of instinctive behavior patterns as well as through comparative morphology. Certainly one of the papers most interesting to Americans is Paul Schiller's instructive "Study of Manipulative Patterns in the Chimpanzee," carried on in the Yerkes laboratories. This perceptive report extends and refines Kohler's famous observations on the tool-using behavior of chimps. Schiller has been able to show how early "play" with component materials results in much more adequate later learning than when such experimentation is delayed until later periods of development. He also anticipated recent psychological observations that the presentation of a reinforcer such as food may impede manipulative exploration and hence problem-solving learning. Schiller also goes far to fit the concept of "insight" into an older trial and error model of learning. In a final paper Lorenz summarizes research of a dozen years of ethology, corrects some of his earlier oversimplified views and acknowledges (albeit somewhat sadly!) that we must move from description of nature to complex abstract mathematical (or cybernetic) models! —D. B. Harris.

**562. SCOTT, JOHN PAUL. Aggression.** Chicago: Univer. of Chicago Press, 1958. 149 p. \$3.75. This book deals primarily with aggression between individuals as opposed to group aggression. The chapter titles convey an accurate summary of the factors involved in aggression as treated by the author: Psychological Factors Affecting Fighting, Aggression as Maladaptive Behavior, The Physiology of Aggression, Heredity and Aggression, Social Causes of Aggression, Ecological Causes of Aggression, and The Social Control of Aggression. Scott's main effort in discussing the antecedents to aggression is directed toward applications of research findings at the infrahuman level to the human level. Though it can certainly be said that his theoretical position is a multivariate one, in his first chapter on psychological factors affecting fighting, he adheres strictly to a stimulus-response position in accounting for the results of research on fighting behavior at the infrahuman level. Aggression is learned according to Scott—just like any other response. A child can acquire habits of nonfighting as well as fighting depending upon experiences he has as a child. The principle of passive inhibition comes in for an important treatment by Scott in his contention that a child can learn the habit of not fighting. Research with puppies was cited in support of this contention. Litters of puppies were picked up frequently at a very young age. They were never hurt nor frightened, but they were helpless with their feet off the ground. As the puppies grew older, all that was needed to control them was to pick them up. Immediately they adopted a helpless attitude as a consequence of this treatment. The puppies, said Scott, had acquired an association between not fighting and being held. He then generalizes to the human level by saying that "a reasonably happy and peaceful environment should automatically produce a child with strong habits of being peaceful with his friends and relatives. A peaceful environment implies that parents and teachers are in some way keeping the

stimulation to fight at a low level. This is relatively easy to do with a young baby, but becomes more and more difficult as the child grows older." After a careful examination of the physiology of aggression, Scott concludes that "there is no physiological evidence of spontaneous stimulation for fighting rising within the body." He means here that there is no need existing within the body for fighting, apart from what may be externally elicited. Scott gives some attention to psychosomatic symptoms which may occur if no outlets for the expression of aggression are allowed. As to the effect of heredity on aggressive behavior, the author cites research showing differences in aggressiveness of different strains of dogs. At the human level Scott suggests, "heredity can enter into the picture only in such ways as lowering or raising the threshold of stimulation, or modifying the physiological equipment for fighting." Social differences in aggression based upon male hormonal output at puberty are discussed. This book is primarily suited for advanced undergraduates in psychology and biology. It should also be useful to teachers and others who face practical problems of controlling aggressive behavior. Students of child development would certainly be interested in this book because of the application to child rearing problems made by Scott. The book makes for interesting reading and perhaps is particularly valuable because of its treatment of research on aggression at the animal level. It would seem appropriate for students of child development to be better informed concerning the latter. —G. Terrell.

563. STRENG, ALICE, FITCH, WARING J., HEDGECOCK, LEROY D., PHILLIPS, JAMES W., & CARRELL, JAMES A. **Hearing Therapy for Children.** (2nd Rev. Ed.) New York: Grune & Stratton, 1958. 353 p. \$6.75. This book differs in only minor details from the 1955 edition. It has basically the same format and content. The authors state that the purpose of the book is to present the special knowledge and skills needed by those who work with children handicapped by hearing loss. The opening chapters deal with the history of deaf education, the problems of deafness in children, and the causes and medical treatment of hearing loss. The following chapters present well-written discussions of case findings, audiometry, the use of hearing aids, and the education of children with mild and moderate losses as well as those who have severe and profound losses. The book is well illustrated with appropriate photographs and diagrams. It is the opinion of this reviewer that the material here presented can be used with profit by both professional and lay people. It appears regrettable that the rather comprehensive list of Hearing Rehabilitation Centers which formed the appendix of the first edition should have been omitted in this edition. —M. O. Shere.

564. TORGERSON, WARREN S. **Theory and Methods of Scaling.** New York: Wiley, 1958. 460 p. \$9.50. This book will without doubt form the standard text on scaling methods for several decades to come. Only a small number of books in the social sciences have the same high quality in presenting descriptions of the various systems which are detailed and yet elegant. The book requires familiarity with algebra up through matrix algebra. Wiley did their usual fine job of bookmaking. —S. G. Vandenberg.

565. TROWELL, H. C., & JELLIFFE, D. B. **Diseases of Children in the Subtropics and Tropics.** London: Edward Arnold, 1958. 919 p. \$18.50. (Baltimore: Williams & Wilkins) The editors of this textbook have combined the collaborative efforts of 74 authorities from 30 different countries into an unusual volume of truly global scope. Here is presented a wealth of first hand clinical experience with circumstances not commonly encountered in the temperate zones. Written specifically from the pediatrician's point of view, this book deals both with nontropical diseases occurring in tropical environments and with diseases primarily prevalent in the warmer climes. The variations introduced into the natural evolution of some diseases and the regional influence on the medical approach to these problems are extremely enlightening. The significance of the subject matter is indicated by the prefatory statements that the majority of the world's children are born in the subtropics and the tropics and that the death rate in these regions is higher than that in the temperate zones.

The text is illustrated by a number of startlingly informative photographs. Not only will this unique book be most useful for those concerned with children's health in the tropic and subtropic areas, but also it undoubtedly will become a valuable reference source for all pediatricians. —W. W. Sutow.

**566. VERNON, M. D. *Backwardness in Reading*.** New York: Cambridge Univer. Press, 1957. 228 p. \$4.75. Teachers and workers within the field of remedial reading should find this survey of the investigations of the factors related to reading disability helpful. Research workers in the field, however, might be disappointed that the author does not give a more intensive analysis of the studies cited as evidence. A total of 392 references are listed which include British as well as American sources. The material may be divided into four general parts: four chapters on the nature and causes of reading disability, one on therapy, two on visual and auditory development, an introductory chapter and a conclusion. In general, it is concluded that experimental and clinical methods have not found any factors that appear in all cases of reading disability, and that the child who is backward in reading has failed to learn one of the essential steps in the development of reading rather than suffering from a visual, auditory, memory, or imagery defect. Failure to develop any one of the many skills necessary in reading proficiency is probably caused by such fortuitous circumstances as absence from school, change in teacher, change in personality, or a lapse of interest and attention. The following reasons are given for the failure of some children to recover from a set-back in reading progress. A small proportion may possess "a congenital disposition towards a set of defects of which reading disability is one." Personality disorders may also be a reason children fail to recover from a breakdown in reading development. The author recognizes, however, the difficulty in distinguishing whether or not these disorders are causes or effects. Personality disorders discussed as more characteristically associated with reading disability are temperamental instability, lack of concentration due to overprotection or too much pressure by parents, hostility and aggression, attention getting, withdrawal, and poor motivation to succeed. Possible factors that remain after congenital disability and personality disorders have been eliminated are innate cognitive incapacity, unfavorable home circumstances, irregular school attendance, poor teaching, or a lack of interest on the child's part. It is concluded that with respect to the cure of reading disability there is no one method which is effective for all cases; it is also concluded that severe cases of reading disability have poor prognosis under any type of a corrective program. —L. Harrell.

**567. WAPNER, SEYMOUR, & WERNER, HEINZ. *Perceptual Development*.** Worcester, Mass.: Clark Univer. Press, 1957. 95 p. \$1.50. This publication reports a series of 11 experiments, each a study of age differences in some aspect of perception. The first six deal with the perception of verticality, the horizon, or the median plane under a variety of conditions like body tilt or "directional dynamics" in the stimulus material itself, e.g., a hand with a pointing index finger. Three experiments are concerned with the effect of these same factors on actual head torsion rather than a verbal report of perception. The final two experiments reported differences in susceptibility to visual illustrations. These experiments are all interpreted in terms of sensory-tonic theory and confirm predictions made from that theory. —A. L. Baldwin.

**568. WATKINS, ARTHUR G. *Paediatrics for Nurses*.** Bristol: John Wright, 1958. 200 p. \$3.75. (Baltimore: Williams & Wilkins) This synoptic discussion of general pediatrics is intended for the nursing profession whose training and practice are British. The approach is clinical and no nursing technique is included, the omission being deliberate. Brevity of the chapters permits only superficial presentation of the subject matter. This limits the usefulness of the book primarily to student nurses. —W. W. Sutow.

**569. WOODS, GRACE E. *Cerebral Palsy in Childhood*.** Bristol: John Wright, 1957. xi+158 p. \$6.50. (Baltimore: Williams & Wilkins) Essentially, this is a

clinical and statistical description of 301 children seen in the Cerebral Palsy Assessment Clinic of the Bristol Royal Hospital for Sick Children. These children were divided by movement defect into the following groups: spastic paraplegia, 26; spastic monoplegia, 13; spastic hemiplegia, 97; spastic quadriplegia, 75; athetosis, 33; ataxia, 29; and rigidity, 28. "It is likely that all cases between the ages of 5 and 17 years in the Administrative County of Bristol have been seen. Therefore the numbers are an accurate estimate of the proportion of cases of varying aetiology and movement defect in Bristol and possibly representative of the total population." A chapter is devoted to each of these groups, presenting the findings first with respect to family history, mother's age at birth, order of pregnancy, and so on, and then grouping and discussing the cases according to etiology. As the author is quick to point out, the numbers become rather small for statistical analysis, and no definitive conclusions are attempted. Following these chapters are four more which show the correlation between cerebral palsy and visual, auditory, speech, and sensory defects, between cerebral palsy and epileptiform disturbances. The final chapter contains a rather discouraging assessment of educability; it is manifest, all in all, that the cerebral palsied child is apt to be multiply handicapped, physically and in other ways. The book itself, because it is factual, will make a valuable contribution to a field too much overshadowed by emotion and wishful thinking. There are 21 clear and informative plates and an extensive bibliography. —I. Altman.

**570. National Manpower Council. *Work in the Lives of Married Women.*** New York: Columbia Univer. Press, 1958. 220 p. \$4.75. This book is an outgrowth (the seventh thus far) of the work of the National Manpower Council, established at Columbia University in 1951 under a grant from the Ford Foundation. This specific volume, dealing with the problems of womenpower, consists of the proceedings of a six-day conference, held in 1957. Henry David, executive director of the Council, is responsible primarily for its preparation. Five main themes are considered: womanpower in the modern world, the reentry of women into the labor force, the utilization of womanpower, income earned by married women, and the relation of working mothers to the development of their children. About a third of the volume is devoted to this last named topic. Of particular interest in this connection are the papers by Eleanor E. Maccoby and Katherine Oettinger, chief of the federal Children's Bureau, summarizing the material and insights on the effects upon children of their mothers' outside employment. Leo Bartemeier adds a psychiatric view of this issue. The summaries of the conference discussion to this, as to other main topics of the volume, are of added value. —J. H. S. Bossard.

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- BALINT, MICHAEL. *Thrills and Regressions.*** New York: International Universities Press, 1959. 148 p. \$4.00.
- BERGLER, EDMUND. *Principles of Self-Damage.*** New York: Philosophical Library, 1959. 469 p. \$6.00.
- COHEN, DOROTHY H., & STERN, VIRGINIA. *Observing and Recording the Behavior of Young Children.*** New York: Teachers Coll., Columbia Univer., 1958. 86 p. \$1.00.
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- DUFF, T. S. *Classroom Practices and Child Development.*** Melbourne: Australian Council for Educational Research, 1959. 60 p.
- DUVALL, ELLEN NEALL. *Kinesiology. The Anatomy of Motion.*** New York: Prentice-Hall, 1959. 292 p. \$5.75.

- EAKIN, MARY K. (Ed.) **Good Books for Children.** Chicago: Univer. of Chicago Press, 1959. 274 p. \$5.95.
- FARNSWORTH, P. R., & McNEMAR, Q. (Eds.) **Annual Review of Psychology, Vol. 10.** Palo Alto, Calif.: Annual Reviews, 1959. 520 p. \$7.00.
- FELDMAN, A. BRONSON. **The Unconscious in History.** New York: Philosophical Library, 1959. 269 p. \$4.75.
- FLEMING, C. M. **Teaching: A Psychological Analysis.** New York: Wiley, 1958. 291 p. \$5.00.
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- FRAIBERG, SELMA H. **The Magic Years.** New York: Scribner's, 1959. 305 p. \$3.95.
- FRANKIEL, RITA V. **A Review of Research on Parent Influences on Child Personality.** New York: Family Service Association of America, 1959. 32 p. \$ .65.
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- GOODENOUGH, FLORENCE L., & TYLER, LEONA E. **Developmental Psychology.** (3rd Ed.) New York: Appleton-Century-Crofts, 1959. 552 p. \$6.00.
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- HAEOUSSERMANN, ELSE. **Developmental Potential in Preschool Children.** New York: Grune & Stratton, 1958. 285 p. \$8.75.
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- HEFFERNAN, HELEN. (Ed.) **Guiding the Young Child** (2nd Ed.) Boston: Heath, 1959. 362 p. \$5.25.
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- HURLOCK, ELIZABETH B. **Developmental Psychology.** (2nd Ed.) New York: McGraw-Hill, 1959. 645 p. \$6.75.
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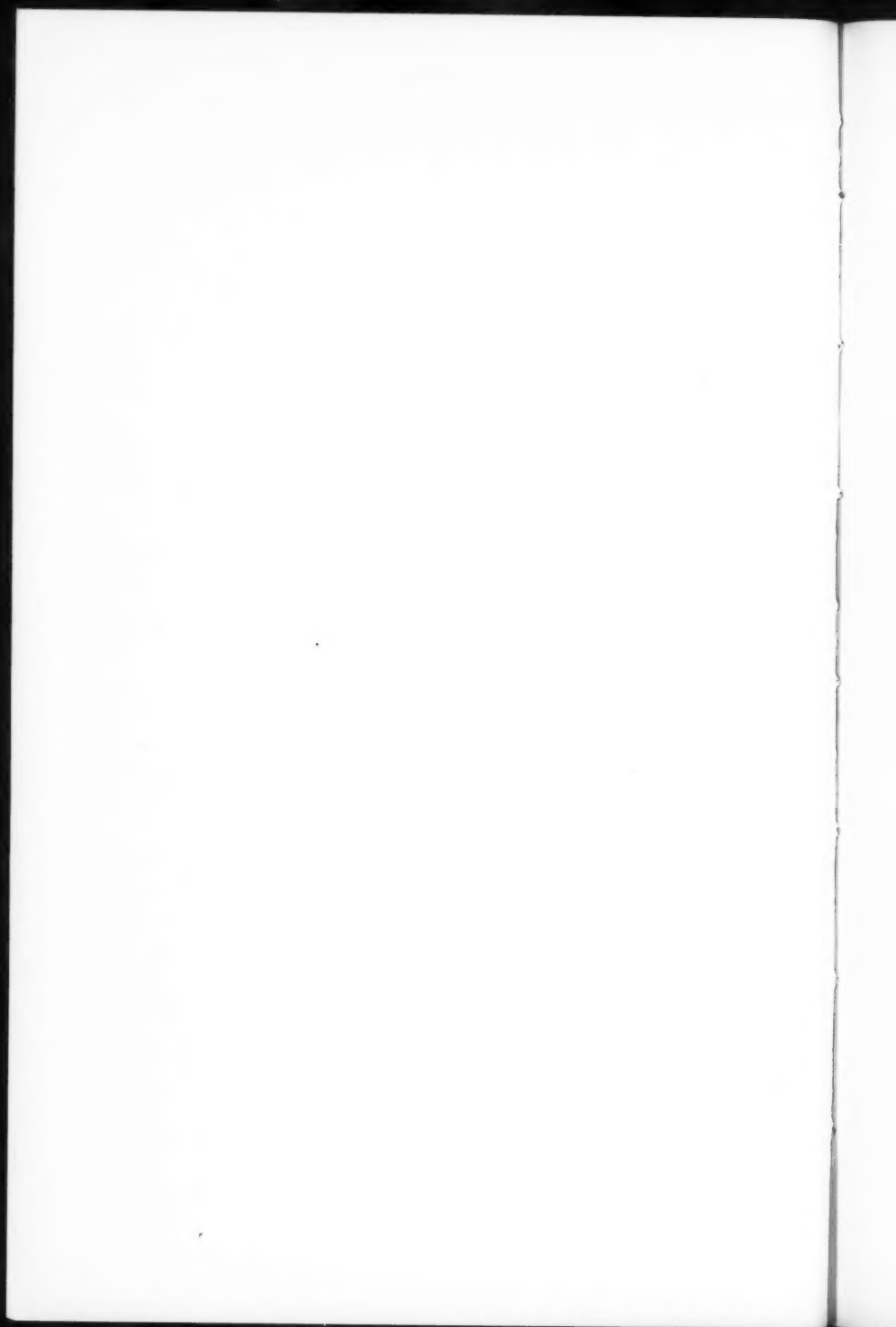
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